

## CO42 – Stop the Pipeline

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont’d)

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**I. Introduction**

*A. Statement of Facts*

On April 5, 2012 the Constitution Pipeline Company, LLC (“Company”) requested pre-filing review of a proposed 30-inch diameter, 121-mile long natural gas transmission line that would run from Susquehanna County, Pennsylvania, through Broome, Chenango, Delaware and Schoharie Counties, New York. The Federal Energy Regulatory Commission (“FERC”) approved the request on April 16, 2012, and assigned docket number PF12-9 to the pre-filing.

On September 14, 2012 FERC published a Notice of Intent to prepare an Environmental Impact Statement in the Federal Register, and on October 9, 2012 supplemented that notice by scheduling an additional hearing, and extending the time for submitting written comments. Approximately 2000 people attended the five public hearings on the scope of work, and over 1000 comments were submitted to docket number PF12-9. Approximately 95% of the comments voiced opposition to the proposed project.

On February 22, 2013 the Company filed draft resource reports, and on June 13, 2013 submitted its application for a certificate of public convenience and necessity, along with a new set of draft resource reports. FERC assigned docket number CP13-499-000 to the project, and issued a Notice of Application on June 26, 2013. Approximately 470 people and organizations intervened, the majority of whom are STP members. PELC filed a motion to intervene on behalf of STP on July 17, 2013.

The Company submitted two additional versions of its draft resource reports, one filed on July 25, 2013, and the second on November 12, 2013. FERC asked for clarifications and more data through a series of Environmental Information Requests (EIRs), and the Company responded with supplemental filings. On December 16, 2013 PELC submitted an analysis of the Company’s failure to adequately respond to the first question in FERC’s August 29, 2013 EIR. FERC issued its DEIS on February 12, 2014, with an April 7, 2014 deadline for public comments.

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### *B. Summary of Concerns*

STP is extremely concerned about the potential impacts of this project on the people, culture, and resources of the Western Catskills and Central New York State. STP believes the pipeline would significantly impact the entire region for many decades, and is disappointed by the lack of sensitivity to the area's unique and varied environment in the DEIS. While FERC's draft review includes much material, its analysis is superficial. This project is over 124-miles long, spans many distinct ecosystems, and requires a site-specific environmental impact statement, not a generic environmental review. It must be written and evaluated as if each parcel of land, each forest, each stream, and each wetland matters.<sup>1</sup> The current draft dismisses the individual nature of the varied landscape through cursory, categorical text, which appears to have been cut and pasted from prior environmental reviews.

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FERC's DEIS is also biased. This is best illustrated by the image on the front cover of the document, which makes it appear as if the topography is flat, or gently rolling, and filled with open pastures.<sup>2</sup> That image couldn't be further from the truth. The proposed route is slated for the tops of ridges, many with steep slopes down to the Susquehanna and Schoharie river valleys. Over 1000 of the 1862 directly impacted acres are of forests, and twenty-eight percent of the route would be up, down, or across steep slopes. Digital manipulation of aerial images cannot hide these facts from a public that lives and works in the area.

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The DEIS fails to respond to many requests for additional information made by other agencies, some of which have permitting authority under this environmental review. In addition, the DEIS does not adequately consider and respond to many of the substantive issues raised by the public. These comments, made since the spring of 2012 under PF12-9, or by STP in its October 9 and November 9, 2012 scoping comments, are hereby incorporated by reference into this document.

<sup>1</sup> See, e.g., Philip Hulbert, Comment (March 18, 2014), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140318-5003](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140318-5003); David and Rebecca Colby, Comment (March 28, 2014), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140328-0018](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140328-0018).

<sup>2</sup> See, e.g., Kerry Lynch, Comment (March 14, 2014), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140314-5002](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140314-5002).

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The comment regarding the photography used for the cover of the draft EIS is noted. The photos on the cover of the EIS were taken by the FERC staff during field visits to the projects' area and are generally representative of the project setting, but does not preclude the existence of other terrain types. The photos were not "digitally manipulated." The proposed projects' crossing of and impacts on steep topography and forested areas are fully disclosed in the EIS.

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The FERC staff has worked closely with both the cooperating agencies and the other permitting agencies in the development of the EIS. We have considered the information requests made by other agencies and included them in our environmental information requests as appropriate. The FERC staff reviewed and considered all substantive comments received during the pre-filing and scoping periods.

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- CO42-4 PELC finds the DEIS to be practically and legally deficient and contrary to the requirements of NEPA and SEQRA. This is particularly true since FERC repeatedly admits in its own environmental review that extensive amounts of required information have not been gathered, and the analyses of a broad range of topics are missing. (For a complete list, see Exhibit 1.) The DEIS must be revised and supplemented in order to be deemed complete.<sup>3</sup>
- For these reasons, and those expressed below, STP respectfully requests that FERC issue a revised draft EIS that contains all required information, and analyses, such as: (1) an adequate assessment of all the environmental impacts of the project that have been reserved for study at a later time, such as the Upland Forest Mitigation Plan;<sup>4</sup> (2) survey information of **all parcels** within 300-feet of the proposed pipeline, as was required by the original, 600-foot study area;<sup>5</sup> (3) a detailed construction schedule that complies with all applicable laws; (4) a needs analysis that complies with the requirements of the Natural Gas Act, FERC's policy, and New York State's Environmental Quality Review Act ("SEQRA"); (5) a complete public interest review, as required under Section 404(b)(1) of the Clean Water Act ("CWA"), and EPA's § 404(b)(1) guidelines; (6) a full cumulative impact analysis that complies with § 404(b)(1) guidelines, 33 CFR § 320.4(a), and SEQRA, including consideration of induced development from the availability of natural gas, extraction of shale gas within a forty-mile study area, the build-out of associated infrastructure, such as compressor stations and gathering lines, and all new interstate gas transmission pipelines, or modifications to existing pipelines, that are needed to carry the gas to the stated target markets; and (7) an alternatives analysis that complies with the requirements of Section 404(b)(1) of the CWA, 40 CFR Part 230, and SEQRA. Proceeding without issuing a revised draft EIS would be arbitrary and capricious.
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<sup>3</sup> NYSDEC, Request for Extension of Comment Period for DEIS (March 24, 2014), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20140324-5129](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20140324-5129), Stop the Pipeline, Request for a Revision of DEIS and Time Extension for Submitting Comments (March 28, 2014), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20140328-5013](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20140328-5013).

<sup>4</sup> For a complete list of all missing information, analysis and documents noted in the DEIS, see Exhibit 1.

<sup>5</sup> DEIS at 4-59.

- CO42-4 See the response to comment FA1-1 regarding information pending at the time of the draft EIS and draft EIS adequacy. As stated in the EIS, our review was completed under the guidelines of the NEPA. The FERC's environmental review is not bound or directed by New York's State Environmental Quality Review Act.
- CO42-5 Constitution's Preliminary Migratory Bird and Upland Forest Plan was filed on May 6, 2014 ([http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14213683](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14213683)) and the EIS (particularly section 4.5) has been updated accordingly. See the response to comment FA4-3 regarding pending field surveys.
- CO42-6 The construction schedule is discussed in section 2.4 of the EIS; however, the exact start of construction would be dependent upon a final Commission decision, subsequent completion of field surveys (see the response to comment FA4-3), acquisition of all necessary federal permits, and a separate authorization from FERC confirming completion of any outstanding conditions. Constitution originally proposed to start construction in the third quarter of 2014, but has amended this date to the second quarter of 2014. It is anticipated that pipeline construction would occur over a period of approximately 9 to 12 months. Constitution has proposed an in-service date of March 2015 although this date no longer appears feasible. We recognize that winter weather, wet conditions, and other unforeseen factors could result in construction schedule adjustments or delays. Iroquois proposed that its construction start in July 2014 and estimated that it would continue for approximately 9 months with a proposed in-service date of March 31, 2015. This is likewise feasible.
- CO42-7 The proposed projects' purpose and need is described in section 1.1 of the EIS, and this section has been updated with new information. See the response to comment LA7-5.
- CO42-8 The COE and the EPA both participated as cooperating agencies in the development of the EIS. The COE is the federal permitting agency responsible for implementation of Section 404 of the Clean Water Act. This permitting process is described in sections 1.5, 4.3, and 4.4 of the EIS.
- CO42-9 Cumulative impacts including development of the Marcellus Shale are discussed in section 4.13 of the EIS which has been updated with new information as indicated in the responses to comments FA4-44 and CO26-10.
- CO42-10 Alternatives are discussed in section 3 of the EIS, which has been updated. Alternative construction methods relevant to Section 404 of the Clean Water Act are discussed in sections 2, 4.3, and 4.4 of the EIS. See the response to comment CO42-8.

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**II. The 45-Day Public Comment Period on the DEIS is Wholly Insufficient, Violates the Public’s Right to Meaningful Participation, and is Contrary to the Express Purposes of NEPA and SEQRA.**

*A. The immensity and complexity of the DEIS warrant a longer comment period.*

The forty-five day comment period does not provide enough time to read the DEIS, and all of the supplemental material, analyze it, and write insightful comments. Many of the people who would be directly affected by the project hold full-time jobs, are untrained in environmental reviews, and have not received any assistance from the regulatory agencies to help them understand this enormously complex project. FERC should have given the public at least three months to understand the material and comment on it. In addition, funds should be provided to the public to hire consultants for a project of this scale and complexity.

The DEIS and appendices are 945 pages long. The draft resources reports, and associated appendices, which are cross-referenced in the DEIS, include an additional 4000 pages, in more than 160 discrete files, containing over 1.4 GB of data. The cross-references are not hot-linked, so these files must be found, and the appropriate pages located. In many instances, the documents must be digitally expanded (zoomed into) in order to make the text legible. Once the pages are enlarged, it’s difficult to find one’s position on them, and one must rely on scroll bars to try to gain perspective. This scenario assumes the public is computer literate, and has high-speed internet access, which is generally not available on the hilltops where the project would be located. The handful of public libraries with paper copies is inadequate.

In addition to the 5000 pages in the DEIS and draft Resource Reports, there are hundreds of detailed pages in the files from the United States Army Corps of Engineers (“Army Corps”). The deadline for reviewing the Army Corp’s documents is the same as the DEIS, adding more data and stress to an already overwhelmed public. Considering the amount of material, and the complexity of it, FERC must give people more time in order to meet NEPA’s mandate for meaningful public participation.

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See the response to comment FA1-1. Where possible and appropriate, we have included internet links to information referenced in the EIS. Most of the materials referenced were plans that were submitted as part of Constitution or Iroquois’ applications, which were filed in the summer of 2013.

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CO42-12      *B. Elected officials are unable to review the DEIS, draft a resolution, and vote within such a short time frame.*

Most municipalities in rural New York State meet monthly, and many elected and appointed officials are either volunteers or serve for a nominal amount of money. While FERC released the DEIS on February 12, 2014, most people and municipalities did not receive a CDROM until the last week of February. There is simply not enough time to review the DEIS, draft a meaningful resolution on behalf of their constituents, and vote on the resolution, particularly if the monthly meetings are regularly scheduled for the first half of the month.<sup>6</sup> In addition, many individual residents, who would be impacted by this project, have stated that the 45-day comment period is insufficient.<sup>7</sup>

CO42-13      *C. STP has not been able to obtain needed documents from state and federal agencies.*

PELC recently filed state Freedom of Information Law (FOIL) and federal Freedom of Information Act (FOIA) requests with the relevant federal and state agencies, including New York State Department of Conservation (NYSDEC) and the Army Corps of Engineers. However, we have not been provided any of the requested materials as of the date of this filing even though our open records requests were submitted 47 days before the comments deadline date of April 7. In fact, NYSDEC notified PELC that it will provide the requested documents on April 7, the same day as the deadline for the comments.

PELC has also been attempting to obtain the Company's precedent agreements. On September 26, 2013 PELC submitted a FOIA request to FERC for the agreements, which had been submitted by the Company as privileged. PELC stated: "The entire application for a certificate of public convenience and necessity, and the resulting authorization for the use of eminent domain, hinges on the terms of these agreements. Such vital documents should not be

<sup>6</sup> Town of Meredith, Comment (March 13, 2014), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20140313-5030](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20140313-5030); Town of Roseboom, Comment (March 14, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140314-5046](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140314-5046).

<sup>7</sup> See, e.g., John Miglietta, Comment (March 10, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140310-5085](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140310-5085); Kerry Lynch, Comment (March 10, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140310-5107](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140310-5107); Mark Pezzati, Comment (March 10, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140310-5179](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140310-5179); Daniel J. Brignoli, Comment (March 13, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140312-5008](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140312-5008).

CO42-12      See the response to comment FA1-1. All comments are considered with equal weight, regardless of the status of the party submitting them.

CO42-13      See the response to comment FA1-1. The FERC's General Counsel's guidance regarding relevant precedent agreements was outlined in its letter dated January 31, 2014.

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withheld from public scrutiny.” FERC granted itself an extension to respond on October 25<sup>th</sup>, and refused to disclose the documents in a letter dated November 19, 2013, almost two months after the original request. PELC filed a timely appeal on December 20, 2013, but FERC’s General Counsel upheld the decision to withhold the documents. In his letter dated January 31, 2014, David L. Morenhof, Acting General Counsel, stated that the documents could be obtained by intervenors through a protective agreement, citing 18 C.F.R. 388.112(b)(2) (2013). However, the Company has not included a protective agreement in the docket, as required under FERC’s regulations. The net result of this situation is that FERC, and the Company, have made it extremely difficult to obtain the information needed to properly respond to this environmental review. This obviously undermines the public participation tenets of NEPA and SEQRA.

CO42-14

**III. The DEIS is Incomplete and Requires a Supplement with an Additional 60-day Public Comment Period.**

*A. FERC admits much information and many required documents are not included.*

FERC admits within the DEIS that numerous sections of the environmental review are incomplete.<sup>8</sup> The type of material that is missing ranges from studies that must be written to data that has not been collected. Some of the missing information, plans, and analyses are needed before decisions can be made by state and federal agencies. FERC has also given a range of time frames in which it must be made available: some must be done before the end of the comment period, some before construction can begin, while other information would be decided in the field, during construction. It is STP’s position that all relevant information must be included in a draft EIS, in a manner that is accessible to the public, so that all of the potential impacts of the entire project can be evaluated.<sup>9</sup>

Admissions of inadequacy appear throughout the DEIS including, but not limited to:

- Upland Forest Mitigation Plan;
- Impacts to waterbodies affected by construction, but not crossed by the project;

<sup>8</sup> See Exhibit 1.

<sup>9</sup> 40 C.F.R. § 1502.9(a) (2014). “The draft statement must fulfill and satisfy to the fullest extent possible the requirements established for final statements in section 102(2)(C) of the Act. If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion.”

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See the responses to comments FA1-1 and FA4-3.

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- Geotechnical feasibility studies;
- Accurate classification of structures;
- Surveys of wetlands, endangered species, and historic resources of the entire proposed route.<sup>10</sup>

The full list of information FERC admits is not in the DEIS can be found attached in Exhibit 1.  
All of the missing data, documents, and analyses should be included in the revised draft EIS.

CO42-15

*B. Lack of a construction schedule makes it impossible to evaluate if the project will comply with environmental laws.*

The current DEIS fails to include a construction schedule for the proposed project. It is critical that FERC supplement the DEIS with a detailed construction schedule because different laws require that specific construction activities take place within set periods of time. For example, New York State only allows cold-water trout streams, classified as (T) and (TS), to be crossed between June 15<sup>th</sup> and September 30<sup>th</sup>.<sup>11</sup> This is to ensure the protection of eggs during spawning, and sufficient growth of juvenile fish so they are capable of swimming away from the construction activity. On the other hand, the United States Fish and Wildlife wants trees and brush cut between September 1 and March 31, when birds are not nesting.<sup>12</sup> It appears these two rules are in conflict, as trees near streams would have to be cut during nesting season in order to lay the pipe when the streams can be crossed.

A similar, yet different, problem occurs in situations where the required information has not yet been acquired. For example, it's possible that blasting cannot be done within half a mile of a bald eagle's nest during breeding season, but the Company won't know where it needs to blast until it is in the midst of construction.<sup>13</sup> Compounding the problem is the fact that the study area for bald eagle nests was a quarter mile from the proposed route, not the required half-mile.<sup>14</sup>

<sup>10</sup> DEIS at § 1.2. Survey access has been denied on 24% of the parcels, representing 30 miles of the proposed route.

<sup>11</sup> NYSDEC, Preliminary Comments on Application, 4 (July 17, 2013), available at [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14131052](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14131052).

<sup>12</sup> Clinton Riley, US Fish and Wildlife, Letter, 3, Appendix D, Agency Correspondence, 1 of 2, PDF page 7 (May 29, 2012), available at [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20131112-5073](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20131112-5073).

<sup>13</sup> DEIS at § 4.1.3.7.

<sup>14</sup> Wildlife Specialists, LLC, Bald Eagle Nest Survey Report, Constitution Pipeline, 6, 8 (June 2013).

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See the response to comment CO42-6. Unless project-specific waivers are granted by the agencies, Constitution must abide with the PFBC and the NYSDEC schedule restrictions for waterbodies (see the response to comment SA4-14) and the FWS schedule restrictions for migratory birds except for the limited circumstances and/or under the conditions as described in section 4.6.1 of the EIS. These circumstances include clearing needed to access sensitive waterbodies for crossing during the appropriate construction window. September is the only month during which both tree clearing and construction within trout streams may occur.

We concluded that with our recommendation that Constitution complete all surveys and a mitigation plan (including for blasting) developed in consultation with the appropriate agencies prior to construction, would protect the bald eagle from adverse impacts.

See the response to comment CO42-6 regarding the projects' proposed schedule. The FERC's compliance monitoring program (see section 2.5.3 of the EIS) would ensure that the project is built in accordance with applicable FERC requirements and all other permits.

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To try to rectify the situation, the Company’s consultants relied on information provided by New York State Department of Environmental Conservation (“DEC”) about known locations of nesting sites beyond the quarter mile study area.<sup>15</sup> However, no systematic survey was performed beyond a quarter mile, even though shallow bedrock can be found along 37% of the entire route. Therefore, to protect bald eagles, the survey area needs to be expanded to half a mile, and wherever there are known nests, geo-technical studies must be performed to determine if blasting would be required within half a mile of those bald eagle nesting sites. Then a schedule would have to be developed, and adhered to, forbidding work in those critical areas during nesting season.

In addition to conflicting requirements of various laws, FERC has completely failed to take into account the extremely unpredictable cold and wet weather of the northwest Catskills. Anyone who has lived or worked on the hilltops where this pipeline might be built can testify to the fact that it is common for the ground to be saturated for ten months of the year.<sup>16</sup> Thus, it is unrealistic for the Company to construct the pipeline in a year – or less – and protect wetlands, forested areas, and agricultural lands from soil compaction, and the resulting intrusion of invasive species.

CO42-16

C. *There is no traffic study.*

The DEIS is completely silent as to how the overweight and oversized construction vehicles, and the hundreds of construction workers, will get to the work sites. Many of the roads in rural New York State are narrow and unpaved. Their subsurface is not capable of supporting heavy vehicles, particularly in wet or snowy conditions, which can occur for eight to ten months of the year in this part of New York State.<sup>17</sup> In addition, there is a steep rise from the contractor yards to the proposed route, and many of the roads that climb those hills have hairpin turns. Allowing huge construction vehicles on these narrow and windy dirt roads would present safety

<sup>15</sup> Wildlife Specialists, LLC, Bald Eagle Nest Survey Report, Constitution Pipeline, 7 (June 2013).

<sup>16</sup> See, e.g., Eugene Marner, Comment (March 27, 2014), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140327-5105](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140327-5105).

<sup>17</sup> Ronald Bailey, Comment (March 28, 2014), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140328-5256](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140328-5256); Rachel Polens, Comment (April 4, 2014), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140404-5094](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140404-5094).

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The transportation of supplies, commuting of workers, and the roads that primarily would be used to access the project area, as well as Constitution’s traffic management plan, are discussed in section 4.9.4 of the EIS. As stated in section 4.9.4.1 of the EIS, Constitution would repair any roads damaged by the pipeline project.

Access roads are discussed in section 2.2.4 of the EIS and the location, description, length, land use, and type of improvement required (if any) for each of the proposed access roads are listed in appendix E. Constitution included a typical drawing of an access road (Volume 2, Appendix J, see figure 87 of the New York ECP), including a stormwater swale, which can be viewed at [http://elibrary.ferc.gov/0/idmws/file\\_list.asp?document\\_id=14160901](http://elibrary.ferc.gov/0/idmws/file_list.asp?document_id=14160901).

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cont'd hazards. Finally, no specifications have been included for proper ditching, road maintenance, and line-of-sight requirements for the dozens of access roads that are being proposed. FERC should not allow the high costs of repairs to be born by the community.<sup>18</sup>

CO42-17 *D. FERC needs to comply with NEPA, not the Company's purported in-service date.*

By issuing a DEIS with so many missing studies and documents, FERC appears to be committed to helping the Company meet its deadline, rather than perform an adequate environmental review. The contractual deadline of Spring 2015 is completely arbitrary as the Company is selling gas to itself, after it has drilled and gathered it.<sup>19</sup> The partners can simply amend their agreements, and grant each other more time to complete the project. Setting an unrealistic deadline is not grounds for rushing a project through the planning phase. All mention of the March 2015 in-service date should be removed from the DEIS. Even the Shipper has acknowledged that a delay is not "that big of a deal."

Cabot, which has committed to transport roughly 0.5 Bcf/d on the pipeline, doesn't view a potential delay as that big of a deal. In its December update, the company said that a delay won't materially impact its expected production growth in 2015 due to its "diversity of takeaway options and the ample amount of lead time" it has to review any schedule changes and change plans accordingly.<sup>20</sup>

If the main Shipper is no longer concerned about meeting the purported in-service date, then certainly FERC should not be. Arbitrary business deadlines are not the concern of a lead agency; adequate environmental reviews are.

The National Environmental Policy Act ("NEPA") encourages the issuance of a complete draft EIS. In fact, according to the Council on the Environment ("CEQ"), a "draft statement must fulfill and satisfy to the fullest extent possible the requirements established for final statements in section 102(2)(C) of the Act."<sup>21</sup> FERC's draft EIS does not comply with this requirement as it

<sup>18</sup> Town of Meredith, Resolution (March 13, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140313-5030](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140313-5030).

<sup>19</sup> Constitution Pipeline Company, LLC, Application for Certificate of Public Convenience and Necessity, Exhibit A, Articles of Incorporation and Bylaws, (June 13, 2013), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20130613-5078](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20130613-5078).

<sup>20</sup> Arjun Sreekumar, *Can Cabot Oil & Gas Corporation's Exceptional Growth Continue?* MOTLEY FOOL (January 24, 2014), *available at* <http://www.fool.com/investing/general/2014/01/24/can-cabots-exceptional-growth-continue.aspx>.

<sup>21</sup> 40 C.F.R. § 1502.9(a) (2014).

CO42-17

See the response to comments FA1-1 and CO42-6. The FERC is not bound by the Applicants' proposed in-service dates. The FERC staff will take the time necessary to adequately complete the NEPA review. See the responses to comments FA4-26 (permanent fill), CO42-5 (upland forest mitigation plan), and CO42-15 (bald eagle).



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cont'd includes countless admissions of being incomplete. On just one page of the DEIS, three studies that must still be performed are listed: (1) "site-specific justifications for the use of permanent fill" for access roads; (2) an Upland Forest Mitigation Plan; and (3) bald eagle surveys and mitigation plan.<sup>22</sup> According to the CEQ, "If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion."<sup>23</sup> In this instance, what's missing is so extensive, and pervasive, the entire draft EIS must be revised and re-issued for a new round of public comments.<sup>24</sup>

CO42-18 **IV. FERC Failed to Respond to Agencies' Comments and Requests for More Information**

The Federal Energy Regulatory Commission ("FERC") is designated as lead agency for the environmental review of new interstate gas transmission lines, but relies on the applicant to obtain enough information to develop an Environmental Impact Statement ("EIS") for the project, and to take a "hard look" at its environmental impacts. The Company filed two draft resource reports on May 21, 2012 and complete sets on February 22, 2013, June 13, 2013, July 25, 2013, and November 12, 2013. FERC requested additional information from the Company on several occasions, which it needs to do in order to complete its draft EIS. Once FERC finalizes the EIS, other agencies may rely on it to decide whether to grant and/or how to condition other certificates and permits required for the project. Some of these agencies have also commented and requested information from the Company in order to obtain adequate information to make determinations with respect to their respective permits.

On December 16, 2013, PELC submitted an analysis of FERC's Environmental Information Requests (EIRs).<sup>25</sup> In its comment, PELC reviewed the Company's response to

<sup>22</sup> DEIS at ES-5.

<sup>23</sup> 40 C.F.R. § 1502.9(a) (2014).

<sup>24</sup> NYSDEC, Request for Extension of Comment Period for DEIS (March 24, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140324-5129](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140324-5129); Stop the Pipeline, Request for a Revision of DEIS and Time Extension for Submitting Comments (March 28, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140328-5013](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140328-5013).

<sup>25</sup> PELC, Comment (Dec. 17, 2013), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20131217-5017](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20131217-5017). (See Exhibit 2.)

CO42-18

The FERC staff (and Constitution) continue to coordinate with the permitting agencies as appropriate. The final EIS has been updated to include additional information and to reflect the comments of the permitting agencies. Responses to all agency comments on the draft EIS, including the COE and the NYSDEC, are provided in this appendix. The FERC has issued numerous environmental information requests throughout the course of this project, including follow-up requests when responses provided by the Applicants were deemed inadequate. Permitting agencies may also issue their own information requests, and may delay their processing of individual permit applications depending upon whether they have sufficient information to proceed. A discussion of alternative M, including the possible routing the pipeline within the median of I-88 was provided in section 3.4.1.2 of the draft EIS. See the response to comment FA4-45 regarding high volume hydraulic fracturing.

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Request No. 1 of FERC’s 40-page request for more information (“EIR”).<sup>26</sup> In Request No. 1, FERC asked the Company to respond to *all* of the agencies’ comments. PELC limited its analysis to the comments made by only two agencies: the United States Army Corps of Engineers (“USACE”) and the New York State Department of Environmental Conservation (“NYSDEC”). PELC found a wide range of problems with the Company’s responses—or lack thereof—to the comments submitted by USACE and NYSDEC. These problems include, but are not limited to: (1) a complete failure to even acknowledge many agency comments; and (2) inadequate responses to many of the other agency requests. While the scope of this comment was limited to problems with the Company’s responses to USACE and NYSDEC, it is almost certain that similar issues permeate the Company’s so-called “responses” to other agencies’ comments, and to FERC’s own requests for information found in the remaining 40 pages of the August 29, 2013 EIR.

Unfortunately, the information that was missing in December 2013 has not been produced by the Company since then, and therefore is not in FERC’s DEIS. For example, FERC has not included an adequate analysis of siting the proposed pipeline within the I-88 median, or of the impacts of hydraulic fracturing along the proposed route, as requested by the USACE and NYSDEC, respectively. Without these, and many other, critical analyses, the DEIS cannot be deemed complete, and the other agencies cannot issue their required certificates and permits.

CO42-19

**V. United States Army Corps of Engineers was Premature in Requesting Public Comments on the DEIS and Related Permit Application Documents**

*A. Most of the United States Army Corps of Engineers’ comments on the scope of work and draft resource reports call for information that is still outstanding*

On September 7, 2012, FERC issued a notice requesting comments on “Environmental Issues” for the EIS it intended to prepare for the proposed project.<sup>27</sup> A month later the Army Corp of Engineers submitted a letter in response, stating

<sup>26</sup> Kevin Bowman, Environmental Information Request for the Constitution Pipeline and Wright Interconnect Projects (Aug. 29, 2013), *available at* <http://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13340013>.

<sup>27</sup> FERC, Notice of Intent to prepare an Environmental Impact Statement for the planned Constitution Pipeline Project, request for comments on Environmental Issues, and notice of public scoping meetings re Constitution Pipeline Company, LLC under PF12-9 (Sept. 7, 2012), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20120907-3012](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20120907-3012).

CO42-19

See the responses to comments FA4-3 and FA4-10. The COE has indicated that it will require complete surveys of the affected route to assess Constitution’s project under the Clean Water Act. We have included relevant information useful for public review, and summaries of voluminous materials where appropriate. For example, wetland delineation reports could have been appended to the EIS but are exceedingly voluminous and do not add substantive value to the EIS when they are already a part of the administrative record for the project. As noted previously, a significant portion of this information and access for surveys in areas where survey permission has been denied would be obtained only after the Commission issues an Order approving or denying the projects.

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The EIS should include the information listed below which outlines USACE requirements for reviewing the project under Federal regulatory jurisdictions, which include Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (RHA) (33 U.S.C. 403).<sup>28</sup>

The USACE made the following requests:

- any alteration or obstruction of waters of the United States (WOUS), stating “[m]ost waterbodies, including wetlands, ephemeral, intermittent, and perennial stream, as well as drainage courses, are considered to be regulated regardless of size.”<sup>29</sup>
- dredge and fill permits, as specified under 33 U.S.C. § 1344;
- activities that would drain or flood wetlands, or disturb wetland soils;
- permits to discharge into wetlands, as specified under 33 C.F.R. §§ 320-332;
- wetland and waterbody delineations, “which require[] an evaluation of hydrology, vegetation, and soils present on the site;”<sup>30</sup>
- “The application must include all proposed activities that are reasonably related to the same project and that require a permit in the same permit application.”<sup>31</sup>
- review of all practicable alternatives to dredging and filling waters of the United States, as specified under 33 U.S.C. § 1344(b)(1) and 40 C.F.R. § 231.10;
- complete cumulative impact analysis, as specified under 33 C.F.R. § 320.4;
- a public and private need analysis, as specified under 33 C.F.R. § 320;
- state water quality certification, required under 33 U.S.C. 1341(a)(1); and
- impact minimization statement, as specified under 33 C.F.R. Part 332.

These requests from the Army Corps of Engineers do an exemplary job of identifying the issues that arise from the proposed project, and specifying the information needed to make a determination. However, much of the information required by the USACE has not been included in the DEIS.

CO42-20

*B. The United States Army Corps of Engineers requested more information, documents and analyses in subsequent letters to FERC.*

<sup>28</sup> U.S. Army Corps of Engineers, New York District, Comment (Oct. 9, 2012), available at [http://elibrary.FERC.gov/dmws/file\\_list.asp?accession\\_num=20121009-5285](http://elibrary.FERC.gov/dmws/file_list.asp?accession_num=20121009-5285).

<sup>29</sup> *Id.*

<sup>30</sup> *Id.*

<sup>31</sup> *Id.*

CO42-20

See the response to CO42-19. Waterbodies and wetlands under the jurisdiction of the COE are discussed extensively in sections 2.3.2.1, 2.3.2.2, 4.3, 4.4, and 4.13 (and other sections) of the EIS along with site-specific information provided in appendices K and L. The COE participated as a cooperating agency in the development and review of the draft and final EISs. We also have responded to the COE’s formal comments on the draft EIS within this appendix (see the response to comment FA5) and have updated the EIS accordingly. The COE’s ongoing and current comments and input into the EIS supersedes its comments filed in the past.

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The Army Corps of Engineers submitted three additional letters, dated March 29, 2013, July 3, 2013, and July 24, 2013. The July 3<sup>rd</sup> letter was to inform FERC that the USACE had not received a Department of Army (DA) permit application. The other two letters made specific comments on the Draft Resource Reports, including, but not limited to:

1. the need for field delineations of all parcels proposed to be impacted by the project;
2. a request to FERC to defer a decision on the project until all parcels have been delineated;
3. the need for a cumulative impact analysis under 33 U.S.C. 1344(b)(1), 40 C.F.R. Part 230, and 33 C.F.R. § 320.4(a);
4. need for clarification on disturbance of surface water bodies by the construction and operation of aboveground facilities;
5. need for evaluation and justification for each method chosen for each stream crossing;
6. need for detailed evaluations for the crossings of wetlands;
7. methods for stockpiling streambed material for post-excavation restoration;
8. need for a thorough review of all data related to the Starrucca Creek crossing;
9. need for information that distinguishes between permanent and temporary impacts to waters and wetlands, and specifies when there would be a conversion from one wetland type to another;
10. need for clarification on how the operation impacts were calculated for wetland impacts;
11. need for a mitigation plan that follows the guidelines of 33 C.F.R. Part 332;
12. need for the delineation of access roads;
13. need for engineering drawings depicting temporary and permanent impacts;
14. need for the completion of required consultations under NEPA as outlined in 32 C.F.R. Part 800, 33 C.F.R. 325, App. C, the Endangered Species Act § 7, and the National Historic Preservation Act § 106;
15. need for clarification of the width of the construction and post-construction wetland corridor;
16. need for copies of all correspondence with Native American Tribes; and
17. need for details and documentation of why the pipeline could not be constructed within NYSDOT's "control of access" area.

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While the Army Corps of Engineers has done a thorough job providing the types of information it needs to perform its distinct environmental review, the Company has not been forthcoming, or transparent, about its responses to these requests. As PELC explained in its December 16, 2013 comment to FERC, the Company did its utmost to obscure whether and how it had, or had not, responded to the agencies. For the complete analysis, see Exhibit 2.

In its March 29, 2013 letter, the USACE explained the Memorandum of Understanding between FERC and the USACE, dated July 11, 2005. Apparently USACE has agreed that FERC will be the lead agency under NEPA reviews of interstate natural gas pipelines. However, USACE will only adopt FERC's NEPA documents if they are "appropriate." The current DEIS does not appear to meet that standard. Many documents and analyses requested by the Army Corps of Engineers have not been included in the DEIS, or have not been performed according to specified statutory standards. The missing or inadequate information and analyses include, but are not limited to:

- a. The environmental review does not meet the standards specified in § 10 of the River and Harbors Act and § 404 of the Clean Water Act.
- b. The Army Corps of Engineers request for "a complete discussion of purpose and need" is missing from the DEIS.
- c. The DEIS fails to fully explore the alternative of constructing the pipeline within the New York State Department of Transportation's "control of access" area, within or along-side of Interstate Highway 88.
- d. The DEIS did not consider all reasonable cumulative impacts for future projects and expansions. For example, it does not include details on the 100-foot tall radio towers, access roads, or local distribution pipelines. The documentation provided in the DEIS is insufficient and fails to meet the standards required under CWA § 404(b)(1), 40 CFR, Part 230, and 33 CFR § 320.4(a). Twenty different factors must be taken into consideration for a proper cumulative impact analysis; many were not in this DEIS.
- e. The mitigation plan in the DEIS fails to meet the standards required in 33 C.F.R. Part 332.
- f. The DEIS fails to provide sufficient descriptions, detailed evaluations, and justifications of how all bodies of water, including wetlands, would be crossed.
- g. The DEIS does not include onsite evaluation of hydrology, vegetation, and soils.

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h. The required consultations and reviews under the Endangered Species Act § 7, and the National Historic Preservation Act § 106, have not been completed, as many parcels have not yet been surveyed.

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C. *Surveys have not been performed on much more of the study area than is indicated in the DEIS*

According to the DEIS, survey access has been denied on 24% of parcels, which represents 30 miles of the proposed route.<sup>32</sup> A review of the alignment maps, correlated with wetland maps, indicates that a significant number of streams and wetlands exist within these 30 miles of land that have not yet been surveyed. Much of it includes forested wetlands, which cannot be seen through remote sensing, and it is unknown whether endangered species or archeological sites are on this private land. Therefore insufficient data exists for an adequate environmental review of impacts and requisite mitigation. Not only is the information provided insufficient, but FERC offers no justification for the use of desktop analysis and remote sensing, instead of actual surveys and field delineation of wetlands, regarding the parcels that have not been surveyed.

In addition, it appears that parcels within the study area, but outside of the construction zone are not being surveyed. During 2012 and 2013, landowners along the route were denying and rescinding permission of access to their land for surveys. At that time, the Company was submitting reports to FERC once or twice a month. According to a footnote in its chart on survey access in April 2013, the Company changed its methodology so that only tracts of land on which the pipeline would be constructed were being counted.<sup>33</sup> In other word, if the pipeline ran along the edge of one parcel of land, and if the owner of the adjoining parcel denied survey access, that adjoining parcel was no longer being counted, even if it was within the study area. By excluding parcels outside of the narrow strip of land on which construction would occur, the Company made it appear as if a higher percentage of land had been surveyed. This possibility is reinforced

<sup>32</sup> DEIS at 1.2.

<sup>33</sup> Stop the Pipeline, Comment (April 26, 2013), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20130426-5128](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20130426-5128); Stop the Pipeline, Comment (May 7, 2013), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20130507-5073](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20130507-5073).

CO42-21

See the responses to comments FA1-1 and FA4-3. Constitution must complete all of the remaining field surveys of the survey corridor once survey access is obtained prior to the completion of agency permitting and the FERC’s authorization to proceed with construction, if the Commission grants a Certificate.

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conf'd | by looking at the top of the alignment sheets. "Denied survey access" status is limited to directly affected parcels.<sup>34</sup>

CO42-22 | *D. Endangered Species Act*

The required assessment under Section 7 of the Endangered Species Act has not been performed.<sup>35</sup> The Northwest Catskill Mountains, and Central New York, provide a habitat for numerous endangered species including, but not limited to, the bald eagle, Indiana bat, dwarf wedge mussel, timber rattlesnake, and the bog turtle. These are in addition to other flora and fauna that are in decline. The proposed project would involve a substantial amount of construction work that would affect the entire region, not just the narrow tract of land that would be cleared for the installation of the pipe. The DEIS, however, does not consider the potentially devastating effect this construction could have on delicate ecosystems, particularly those found in ridge-top, forested wetlands, outside the zone of construction. Nor does it consider downstream impacts from construction activities in the headwaters of the Susquehanna River. The United States Environmental Protection Agency and Army Corps of Engineers have recently signed a proposed rule that emphasizes the importance of protecting headwaters.<sup>36</sup>

As noted above, the survey area for bald eagle nests was limited to a quarter mile from the proposed pipeline, while the acknowledged impact zone is half a mile if there were to be blasting. No surveys were performed for bald eagles.<sup>37</sup> In addition, bat surveys were only done in Susquehanna County, Pennsylvania, and need to be done in New York. As discussed in Hudsonia's report, surveys for many species that may be vulnerable were not performed. (See Exhibit 3.) Therefore the DEIS is incomplete, and should be revised after performing proper studies, pursuant to § 7 of the Endangered Species Act, that include the entire area potentially affected by the construction of the pipeline.

<sup>34</sup> Draft Resource Reports, Appendix H (Nov. 12, 2013), available at [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20131112-5073](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20131112-5073).

<sup>35</sup> Endangered Species Act, 16 U.S.C. § 1531 (2012).

<sup>36</sup> US EPA and USACE, *Clean Water Act Definition of "Waters of the U.S."* (March 25, 2014), available at <http://water.epa.gov/lawsregs/guidance/wetlands/CWAwaters.cfm> [hereinafter "Waters of the U.S."].

<sup>37</sup> Kerry Lynch, Comment (March 18, 2014) available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140318-5048](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140318-5048).

CO42-22

See the response to comment FA4-37. Section 4.7 of the EIS discusses potential impacts on all federally and state-listed species. FERC regulations as well as federal law require FERC to complete any and all necessary Endangered Species Act consultation prior to authorizing construction of a project. This project is no exception. Constitution performed studies for federally listed species in consultation with the FWS. The FWS did not require bat surveys in New York as discussed in section 4.7.2. See the response to comment 42-15 regarding the bald eagle.

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CO42-23 **VI. FERC's DEIS Must Comply with SEQRA if it is to be Used to Grant a New York State § 401 Water Quality Certificate, and other New York State Permits.**

The NYSDEC has said that the agency will use FERC's EIS as the basis for New York State's 401 Water Quality Certification, and other required permits. However, in order for NYSDEC to adopt FERC's EIS, it must meet the standards of New York State's Environmental Quality Review Act ("SEQRA"). Specifically, New York State law allows for the adoption of a NEPA based EIS "provided that the federal EIS is sufficient to make findings under section 617.11 of this Part."<sup>38</sup> In comparison to NEPA, SEQRA requires a higher standard of review. The regulations for NEPA require the lead agency to: (1) discuss the purpose and need of a project; (2) discuss alternatives to the project; and (3) examine the affected environment and the consequences.<sup>39</sup> This essentially amounts to taking a "hard look" at the project, identifying the environmental consequences, and performing minor mitigation in compliance with existing statutes and regulations. However, SEQRA requires that the lead agency: (1) weighs and balances the environmental impacts against social and economic considerations; (2) provides a rationale for the decision; and (3) avoids or minimizes environmental impacts.<sup>40</sup> The current DEIS does not meet SEQRA's standards.

CO42-24 **VII. FERC Fails to Demonstrate that the Project Will Not Cause and/or Contribute to Violations of New York State Water Quality Standards.**

Section 401 of the federal Clean Water Act requires that before any federal license or permit is issued, the state must first certify that the action will not cause or contribute to violations of any state water quality standards. This certification is known as a CWA §401(a) state water quality certification ("WQC"). In connection with the present project, the Company has applied for at least two federal licenses and permits that trigger section 401's requirement that it first obtain a WQC from NYSDEC: (1) FERC's Certificate of Public Convenience and Necessity, and (2) USACE's CWA section 404 dredge and fill permit.

<sup>38</sup> 6 N.Y. COMP. CODES R. & REGS. § 617.15 (2014).

<sup>39</sup> 40 C.F.R. § 1502 (2014).

<sup>40</sup> 6 N.Y. COMP. CODES R. & REGS. § 617.11 (2014).

CO42-23

The EIS has been prepared in accordance with NEPA and its implementing regulations and includes a statement of the project proponents' purpose and need, alternatives, and the affected environment and environmental consequences. The Commission will weigh the projects' environmental impacts with social and economic considerations, and if the projects are certificated, the Commission's Order will include a rationale for the decision and additional conditions to avoid or minimize environmental impacts. As indicated by the commentor, the NYSDEC may adopt the EIS to fulfill its own requirements under New York State's Environmental Quality Review Act. If the NYSDEC determines it needs additional information beyond what we have presented in the EIS to complete its analysis, then it is responsible for obtaining that information and developing any additional analysis.

CO42-24

See the responses to comments FA1-1, FA4-3, and CO42-20. We conclude that the measures described in sections 4.3 and 4.4 and appendices K and L of the EIS would reduce impacts on groundwater, surface water, and wetlands to the extent practicable. The PADEP and the NYSDEC are responsible for determining whether the proposed projects' permit applications meet the respective states' implementation standards for issuance of water quality certificate under Section 401 of the Clean Water Act. It has been our experience that FERC regulated pipeline projects do not generally violate water quality standards.



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A review of FERC’s DEIS and the Company’s project application (including all draft resource reports) reveal that FERC and the Applicant have utterly failed to demonstrate that the project will not cause or contribute to violations of New York State water quality standards. The plain truth, as discussed below and in the report prepared by Hudsonia, is that the project will in fact cause and contribute to gross violations of New York State water quality standards set forth at 6 NYCRR Parts 701, 702, 703 and 704, both to surface waters and to ground waters beneath and around the construction areas.<sup>41</sup> (The Hudsonia report is attached as Exhibit 3, and is hereby incorporated into these comments.)

Moreover, FERC has acknowledged that the DEIS is incomplete, which makes this environmental review insufficient for NYSDEC to make permitting decisions, or specific findings, as required under SEQRA.<sup>42</sup> NYSDEC itself has repeatedly and expressly stated that the information provided is incomplete and inadequate.<sup>43</sup> Because NYSDEC lacks sufficient information to make a determination concerning impacts of the project upon water quality, to perform antidegradation analysis required under state and federal law, to make a public interest finding pursuant to 6 NYCRR § 608.8, and to make findings under SEQRA, it must deny the WQC, at least until such time that a demonstration has been made by FERC and the Applicant that water quality standards (including the antidegradation policy) will not be violated.<sup>44</sup> Moreover, if FERC later provides sufficient information for NYSDEC to make such legally required determinations, such information must also be provided to the public, and an opportunity for data review and public comment must be afforded, lest the project be found to have illegally avoided the public scrutiny guaranteed under state and federal law.

<sup>41</sup> All fresh groundwaters of New York State are classified as “GA fresh groundwaters.” The best usage of “GA fresh groundwater” is “as a source of potable water supply.” 6 NYCRR §§ 701.18, 701.15. “Potable water” is defined as “those fresh waters usable for drinking, culinary or food processing purposes.” 6 NYCRR § 700.1(a)(48).

<sup>42</sup> 6 N.Y. COMP. CODES R. & REGS. § 617.11.

<sup>43</sup> Patricia Desnoyers, NYSDEC, Request for a Revised DEIS and Extension of Comment Period (March 24, 2014), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140324-5129](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140324-5129).

<sup>44</sup> See, e.g., NYSDEC, Notice of Denial of 401 WQC for Entergy Indian Point, 12-13 (April 2, 2010), available at [http://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/ipdenial4210.pdf](http://www.dec.ny.gov/docs/permits_ej_operations_pdf/ipdenial4210.pdf) (noting denial of WQC based upon missing information, but that NYSDEC could reconsider the denial should the applicant demonstrate compliance with the applicable standards and criteria).

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In sum, NYSDEC needs a complete record upon which to make its WQC permitting and SEQRA decisions, including all of the necessary information concerning each and every waterbody and groundwater that will be affected by this enormous project. At that point, NYSDEC will need to:

1. Determine whether CP has demonstrated compliance with Sections 301-303, 306 and 307 of the CWA, as implemented by the following provisions:
  - a. effluent limitations and water quality-related effluent limitations set forth in Section 754.1 Title 6 NYCRR;
  - b. water quality standards and thermal discharge criteria set forth in Parts 701, 702, 703 and 704 of Title 6 NYCRR;
  - c. standards of performance for new sources set forth in Section 754.1 of Title 6 NYCRR;
  - d. effluent limitations, effluent prohibitions and pretreatment standards set forth in Section 754.1 of Title 6 NYCRR;
  - e. prohibited discharges set forth in Section 751.2 of Title 6 NYCRR; and
  - f. state statutes, regulations and criteria otherwise applicable to such activities.<sup>45</sup>
2. Review the expected impacts to each affected waterbody for compliance with New York State's antidegradation policy, as required by EPA regulations.<sup>46</sup>
3. Apply the standards set forth in 6 NYCRR § 608.8 to determine whether the project will serve the public interest.<sup>47</sup> In making this determination, the agency must consider whether the proposal is reasonable and necessary; whether the proposal will endanger the health, safety or welfare of the people; and whether the proposal will cause unreasonable, uncontrolled or unnecessary damage to the natural resources of the State;<sup>48</sup> and
4. Make the express findings required by SEQRA, which must:
  - a. consider the relevant environmental impacts, facts and conclusions disclosed in the final EIS;

<sup>45</sup> 6 N.Y. COMP. CODES R. & REGS. § 608.9.

<sup>46</sup> See [http://www.dec.ny.gov/docs/water\\_pdf/togs139.pdf](http://www.dec.ny.gov/docs/water_pdf/togs139.pdf); 40 C.F.R. § 131.12 (2014).

<sup>47</sup> 6 N.Y. COMP. CODES R. & REGS. § 608.8.

<sup>48</sup> *Id.*

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- b. weigh and balance relevant environmental impacts with social, economic and other considerations;
- c. provide a rationale for the agency's decision;
- d. certify that the requirements of [SEQRA] have been met; and
- e. certify that consistent with social, economic and other essential considerations from *among the reasonable alternatives available, the action is one that avoids or minimizes adverse environmental impacts to the maximum extent practicable, and that adverse environmental impacts will be avoided or minimized to the maximum extent practicable* by incorporating as conditions to the decision those mitigative measures that were identified as practicable.<sup>49</sup>

Based upon the present public record, it would be impossible for NYSDEC to rationally conclude that this project would not cause or contribute to violations of state water quality standards in any of the 277 waterbodies that would be crossed/affected, including impacts from crossing an additional 90 acres of wetlands. The DEIS simply lacks the necessary data and detail for NYSDEC to carefully and adequately consider the expected impacts upon each affected waterbody, or to perform the required antidegradation review required by state and federal law.

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A. Water quality impacts.

NYSDEC's policy is to use Horizontal Directional Drilling ("HDD") where the project would cross or otherwise impact a body of water because crossing streams with ditches is more likely to cause water quality violations (e.g., erosion, sedimentation, turbidity).<sup>50</sup> Despite this, the Company proposes to use dam and levee systems at all but 7 of the 277 water bodies that would be crossed.<sup>51</sup> NYSDEC stated that if a method besides HDD is to be utilized, then FERC must provide a description of the proposed alternative and explain why HDD is not the proper method to use on the specified location, why the proposed alternative has been selected, and the extent that it offers a practical solution that HDD would not.<sup>52</sup> For additional discussion of the specific

<sup>49</sup> 6 N.Y. COMP. CODES R. & REGS. § 617.11(d) (emphasis added).  
<sup>50</sup> NYSDEC, Scoping Comments (Nov. 7, 2012), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20121106-5145](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20121106-5145).  
<sup>51</sup> DEIS at 2-21 – 2-22.  
<sup>52</sup> NYSDEC, Scoping Comments (Nov. 7, 2012), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20121106-5145](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20121106-5145).

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See the response to comment CO42-24. Waterbodies are proposed to be crossed using either dry or trenchless methodologies, which would limit the potential for erosion, sedimentation, or turbidity. See the response to comment FA4-34 and section 4.3.3 of the EIS regarding Constitution's Trenchless Feasibility Study, which can be accessed in full at link [http://elibrary.ferc.gov/0/idmws/file\\_list.asp?document\\_id=14160901](http://elibrary.ferc.gov/0/idmws/file_list.asp?document_id=14160901), see volume II appendix N. Given workspace requirements, geotechnical conditions, constraints, and feasibility specifications, we conclude that it is not feasible or practicable to use trenchless methods (conventional bore, HDD, and direct pipe) at all waterbody locations. Proposed site-specific waterbody crossing methods and information are provided in appendix K. Endangered species are discussed in section 4.7 of the EIS.

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expected water quality impacts from the project, please refer to the report prepared by Hudsonia, attached to these Comments as Exhibit 3.

It also must be emphasized that the issuance of a WQC pursuant to 6 NYCRR § 608.9 requires an applicant to demonstrate compliance with *all* “State statutes, regulations and criteria otherwise applicable to such activities.”<sup>53</sup> Thus, any expected violations of state law by the project must result in a denial of the WQC. For example, pursuant to ECL Article 11, the “taking, importation, transportation, possession or sale of any endangered or threatened species of fish, shellfish, crustacea or wildlife, or hides or other parts thereof . . . is prohibited, except under license or permit from the department.”<sup>54</sup> “Taking” and “take” are defined as “pursuing, shooting, hunting, killing, capturing, trapping, snaring and netting fish, wildlife, game, shellfish, crustacean and protected insects, and all lesser acts such as disturbing, harrying or worrying, or placing, setting, drawing or using any net or other device commonly used to take any such animal.”<sup>55</sup> To the extent that the project is expected to result in any take of any endangered or threatened species, such take would be unlawful, and would impair the best usage of the subject waters for propagation and survival of such species, which would constitute a violation of state water quality standards.<sup>56</sup>

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### *B. Antidegradation Review*

With respect to antidegradation review, the CWA’s implementing regulations “require that state water quality standards include ‘a statewide antidegradation policy.’”<sup>57</sup> Thus, water quality standards established in accordance with the CWA “define the quality goals of a water body . . . by designating the use or uses to be made of the water, by setting criteria necessary to protect the uses, and by incorporating an antidegradation policy designed to prevent the gradual deterioration of the quality of the water body.”<sup>58</sup>

<sup>53</sup> 6 N.Y. COMP. CODES R. & REGS. § 608.9(a)(6) (emphasis added).

<sup>54</sup> See ECL § 11-0535(2).

<sup>55</sup> See ECL § 11-0103 (13).

<sup>56</sup> See 6 N.Y. COMP. CODES R. & REGS. § 701.11. See also Hudsonia Report, Exhibit 3 (discussing expected impacts upon endangered and threatened species).

<sup>57</sup> *PUD No. 1 v. Washington Dep’t of Ecology*, 511 U.S. 700, 705 (1994) (quoting 40 CFR § 131.12).

<sup>58</sup> *Niagara Mohawk Power Corp. v. State Dep’t of Envtl. Conservation*, 82 N.Y.2d 191, 194 (N.Y. 1993).

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We conclude that with implementation of Constitution’s ECPs, which include the FERC Plan and Procedures, and the implementation of dry or trenchless crossing methods at all waterbodies (see the response to comment CO42-25), that designated water quality uses would not be degraded along the projects’ area.

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1. Federal Antidegradation Provisions

The objective of the Federal CWA is to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”<sup>59</sup> To achieve this objective, the CWA, *inter alia*, mandates that states adopt and implement water quality standards setting forth water quality goals and criteria for individual water bodies within the state.<sup>60</sup> EPA guidance explains that “[a]ntidegradation implementation is an integral component of a comprehensive approach to protecting and enhancing water quality.”<sup>61</sup> An antidegradation policy established pursuant to the CWA must “ensure that state standards will be “sufficient to maintain existing beneficial uses of navigable waters, preventing their further degradation” by allowing revisions to regulatory or permitting standards “only if such revision is subject to and consistent with the antidegradation policy established under [CWA § 303].”<sup>62</sup> Notably, the antidegradation requirements stemming from the CWA extend to point source *and* nonpoint source activities.<sup>63</sup>

Federal regulations implementing the CWA establish several tiers of antidegradation protection.<sup>64</sup> A state’s “antidegradation policy and implementation methods shall, at a minimum, be consistent with” these Federally established tiers.<sup>65</sup> “Tier I” protection “establishes the minimum water quality standard for *all* of a State’s waters”<sup>66</sup> and requires that “[e]xisting in

<sup>59</sup> 33 U.S.C. § 1251(a).  
<sup>60</sup> 33 U.S.C. § 1313; *see also* 40 C.F.R. § 130.0(b) (“Water quality standards (WQS) are the State’s goals for individual water bodies and provide the legal basis for control decisions under the Act”); 40 C.F.R. § 130.3 (“A water quality standard (WQS) defines the water quality goals of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses. . . . Such standards serve the dual purposes of establishing the water quality goals for a specific water body and serving as the regulatory basis for establishment of water quality-based treatment controls and strategies beyond the technology-based level of treatment required by sections 301(b) and 306 of the Act.”).  
<sup>61</sup> U.S. EPA, Water Quality Handbook - Chapter 4: Antidegradation, *available at*, <http://water.epa.gov/scitech/swguidance/standards/handbook/upload/hbk-ch4.pdf>, at Introduction [hereinafter “EPA Water Quality Handbook – Antidegradation”].  
<sup>62</sup> *PUD No. 1 v. Washington Dep’t of Ecology*, 511 U.S. 700, 705 (1994) (quoting 33 U.S.C. § 1313(d)(4)(B)); *see* 33 U.S.C. § 1313(d)(4)(B) (“any water quality standard established under this section, or any other permitting standard may be revised only if such revision is subject to and consistent with the antidegradation policy established under this section”).  
<sup>63</sup> *See* EPA Water Quality Handbook – Antidegradation § 4.8.  
<sup>64</sup> *See generally* EPA Water Quality Handbook – Antidegradation § 4.2.  
<sup>65</sup> 40 C.F.R. § 131.12(a).  
<sup>66</sup> *Ky. Waterways Alliance v. Johnson*, 540 F.3d 466, 471 (6th Cir. 2008) (emphasis added).

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stream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.<sup>67</sup> The protection of “existing” uses is aimed toward achieving the “fishable”/“swimmable” goals of the CWA.<sup>68</sup>

Federal regulations define “[e]xisting uses” as “those uses actually attained in the water body on or after November 28, 1975,<sup>69</sup> whether or not they are included in the water quality standards.”<sup>70</sup> EPA has explained that the phrase “existing uses are those uses actually attained” means “the use and water quality necessary to support the use that have [sic] been achieved in the waterbody on or after November 28, 1975.”<sup>71</sup> With a focus on “the past or present condition of the water,” an existing use describes “the highest degree of uses and water quality necessary to support the uses that have been achieved *at any time* since November 28, 1975.”<sup>72</sup> Waterbody uses relate to a distinct purpose (e.g., recreation, public water supply) or function (e.g., supporting an aquatic ecosystem).<sup>73</sup> An “existing use” “can be established by demonstrating that: fishing, swimming, or other uses have actually occurred since November 28, 1975; *or* that the water quality is suitable to allow the use to be attained.”<sup>74</sup> EPA has explained that “[i]n nearly all cases, a waterbody will have achieved some degree of use related to aquatic life, wildlife, and human activity on or after November 28, 1975.”<sup>75</sup>

<sup>67</sup> 40 C.F.R. § 131.12(a)(1).

<sup>68</sup> 33 U.S.C. § 1251(a)(2).

<sup>69</sup> November 28, 1975 is the date that EPA promulgated the initial Federal water quality standards regulations related to existing uses. *See* 40 Fed. Reg. 55,334 (Nov. 28, 1975).

<sup>70</sup> 40 C.F.R. § 131.3(e).

<sup>71</sup> Letter from D. Keehner (EPA) to D. Smithee (Oklahoma Water Resource Board) (September 5, 2008), Attachment at 1, *available at*, <http://water.epa.gov/scitech/swguidance/standards/upload/Smithee-existing-uses-2008-09-23.pdf>.

<sup>72</sup> Letter from D. Keehner (EPA) to D. Smithee (Oklahoma Water Resource Board) (September 5, 2008), Attachment at 8, *available at*, <http://water.epa.gov/scitech/swguidance/standards/upload/Smithee-existing-uses-2008-09-23.pdf> (emphasis added); *Ohio Valley Envtl. Coalition v. Horinko*, 279 F. Supp. 2d 732, 751 (S.D. W. VA. 2003).

<sup>73</sup> Letter from D. Keehner (EPA) to D. Smithee (Oklahoma Water Resource Board) (September 5, 2008), Attachment at 1, *available at*, <http://water.epa.gov/scitech/swguidance/standards/upload/Smithee-existing-uses-2008-09-23.pdf>.

<sup>74</sup> EPA Water Quality Handbook – Antidegradation § 4.4 (emphasis in original).

<sup>75</sup> Letter from D. Keehner (EPA) to D. Smithee (Oklahoma Water Resource Board) (September 5, 2008), Attachment at 1, *available at*, <http://water.epa.gov/scitech/swguidance/standards/upload/Smithee-existing-uses-2008-09-23.pdf>.

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Tier I antidegradation protection of “existing uses” “provides the absolute floor of water quality in all waters of the United States” and “applies a minimum level of protection to all waters.”<sup>76</sup> that is, “a minimum use and level of water quality that must be maintained to protect uses that have already been attained.”<sup>77</sup> Thus, “designated” water uses established by the states pursuant to CWA § 303 must support and protect, and cannot jeopardize the “existing” uses of the water that have been attained.<sup>78</sup> EPA guidance explains that “[i]f a planned activity will foreseeably lower water quality to the extent that it no longer is sufficient to protect and maintain the existing uses in that waterbody, such an activity is inconsistent with EPA’s antidegradation policy.”<sup>79</sup> “In such a circumstance the planned activity must be avoided or adequate mitigation or preventive measures must be taken to ensure that the existing uses and the water quality to protect them will be maintained.”<sup>80</sup> No activity that could partially or completely eliminate an existing use may be authorized, consistent with antidegradation requirements.<sup>81</sup>

Federal “Tier II” antidegradation protection requires that:

“[w]here the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State’s continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located.”<sup>82</sup>

<sup>76</sup> EPA Water Quality Handbook – Antidegradation § 4.2; Water Quality Standards Regulation, 48 Fed.Reg. 51,400, 51,402-51,403 (Nov. 8, 1983).

<sup>77</sup> Letter from D. Keehner (EPA) to D. Smithee (Oklahoma Water Resource Board) (September 5, 2008). Attachment at 8, *available at*, <http://water.epa.gov/scitech/swguidance/standards/upload/Smithee-existing-uses-2008-09-23.pdf>.

<sup>78</sup> *PUD No. 1 v. Washington Dep’t of Ecology*, 511 U.S. 700, 718 (1994) (citing 40 C.F.R. § 131.12(a)(1); NYSDEC O&D Memo at 2 (directing the application of water quality-based effluent limitations to provide for the protection and maintenance of attained higher existing uses above those included in standards currently assigned to waters). Thus, if a water body is designated for a use that requires less stringent criteria than a use that has been or is being attained (that is, an existing use), the State must revise the use of that water body to reflect the use that is being attained. EPA Water Quality Handbook § 2.8; 40 C.F.R. § 131.10(i); *see also* 40 CFR §§ 131.3(e), 131.3(f).

<sup>79</sup> EPA Water Quality Handbook – Antidegradation § 4.4; 40 C.F.R. § 131.12(a)(1).

<sup>80</sup> EPA Water Quality Handbook – Antidegradation § 4.4; 40 C.F.R. § 131.12(a)(1).

<sup>81</sup> EPA Water Quality Handbook – Antidegradation § 4.4; 40 C.F.R. § 131.12(a)(1); *see also PUD No. 1 v. Washington Dep’t of Ecology*, 511 U.S. 700, 718-19 (1994).

<sup>82</sup> 40 C.F.R. § 131.12(a)(2); *see also* 33 U.S.C. § 1313(d)(4)(B).

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The goal of this protection is to preserve “high-quality waters,” i.e., those “waters whose quality exceeds that necessary to protect the section 101(a)(2) goals of the [Clean Water] Act” “regardless of use designation.”<sup>83</sup>

In the event a state allows degradation or lower water quality of Tier II waters, at a minimum, “the State shall assure water quality adequate to protect existing uses fully” and “that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.”<sup>84</sup> In other words, under Tier II, “water quality may not be lowered to less than the level necessary to fully protect the ‘fishable/swimmable’ uses and other existing uses.”<sup>85</sup> EPA explains that, in relation to Tier II antidegradation protection, “[i]n no case may water quality be lowered to a level which would interfere with existing or designated uses.”<sup>86</sup> Thus, Tier II antidegradation, like Tier I, is aimed at protecting existing water uses and water quality which is high enough to support a designated use of a waterbody.

Moreover, water quality “may be lowered even to those [fishable/swimmable, designated use, or other existing use] levels only *after* following all the provisions described in section 131.12(a)(2).”<sup>87</sup> As the Federal regulation indicates, and EPA guidance further explains, prior to any lowering of water quality,

there must be an antidegradation review consisting of: a finding that it is necessary to accommodate important economical or social development in the area in which the waters are located . . . ; full satisfaction of all intergovernmental coordination and public participation provisions . . . ; and assurance that the highest statutory and regulatory requirements for point sources, including new

<sup>83</sup> EPA Water Quality Handbook – Antidegradation §§ 4.2, 4.5.

<sup>84</sup> 40 C.F.R. § 131.12(a)(2).

<sup>85</sup> EPA Water Quality Handbook – Antidegradation § 4.2; see *Ohio Valley Envtl. Coalition v. Horinko*, 279 F. Supp. 2d 732, 751 (S.D. W. Va. 2003) (finding that EPA’s interpretation of Tier II antidegradation protection “as applying to current water quality levels is reasonable”).

<sup>86</sup> U.S. EPA, Antidegradation Policy, <http://water.epa.gov/scitech/swguidance/standards/adeq.cfm> (last visited May 10, 2013).

<sup>87</sup> EPA Water Quality Handbook – Antidegradation § 4.2 (emphasis added); see also 40 C.F.R. § 131.12(a)(2).

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source performance standards, and best management practices for nonpoint source pollutant controls are achieved.<sup>88</sup>

The latter factor “ensures that the *limited* provision for lowering water quality of high-quality waters down to ‘fishable/swimmable’ levels will not be used to undercut the Clean Water Act requirements for point source and nonpoint source pollution control.”<sup>89</sup> A state’s ability to lower water quality *after* meeting all necessary requirements, provides “relief only in a few *extraordinary* circumstances where the economic and social need for the activity clearly outweighs the benefit of maintaining water quality above that required for ‘fishable/swimmable’ water, and both cannot be achieved,” and the “burden of demonstration on the individual proposing such activity will be *very high*.”<sup>90</sup>

Notably, States may not categorically exclude non-*de minimus* pollution activities from Tier II antidegradation review.<sup>91</sup> *Site-specific antidegradation analysis is required*,<sup>92</sup> and, in fact, the Tier II antidegradation review requirements of 40 C.F.R. § 131.12(a)(2) “are triggered by any action that would result in the lowering of water quality in a high-quality water.”<sup>93</sup> EPA has explained that, in relation to Tier II antidegradation protection, “no permit may be issued, without an antidegradation review.”<sup>94</sup>

Importantly, antidegradation protections also unequivocally apply to waterbodies that are impaired, *i.e.*, those waters that are not currently meeting designating and existing uses, and water quality standards.<sup>95</sup> In particular, antidegradation must be applied and considered in the

<sup>88</sup> EPA Water Quality Handbook – Antidegradation § 4.5; 40 C.F.R. § 131.12(a)(2); *see also* *Islander E. Pipeline Co., LLC v. Comm. Dep’t of Envtl. Prot.*, 482 F.3d 79, 120 (2d Cir. 2006) (“In brief, the [antidegradation] policy requires that where water quality is better than the criteria established in the Water Quality Standards, such existing high quality must be maintained except under exceptional and very limited circumstances.”).

<sup>89</sup> EPA Water Quality Handbook – Antidegradation § 4.5 (emphasis added).

<sup>90</sup> EPA Water Quality Handbook – Antidegradation § 4.5 (emphasis added).

<sup>91</sup> *Ky. Waterways Alliance v. Johnson*, 540 F.3d 466 (6th Cir. 2008).

<sup>92</sup> *See Ohio Valley Envtl. Coalition v. Horinko*, 279 F. Supp. 2d 732, 757-62 (S.D. W. Va. 2003).

<sup>93</sup> EPA Water Quality Handbook – Antidegradation § 4.5.

<sup>94</sup> EPA Water Quality Handbook – Antidegradation § 4.5.

<sup>95</sup> Per Federal regulations, states are required to identify impaired waterbodies which do not meet water quality standards, “including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements.” 40 C.F.R. § 130.7. *See also* U.S. EPA, Impaired Waters and Total Maximum Daily Loads, <http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/index.cfm> (last visited May 10, 2013) (“Under section 303(d) of the Clean Water Act, states, territories, and authorized tribes are required to develop lists of impaired waters.

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context of the development or revision of total maximum daily loads (“TMDLs”) and load allocations of pollutants to waterbodies that are currently impaired and, thus, not meeting water quality standards.<sup>96</sup> A TMDL “is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards.”<sup>97</sup> “As an integral part of the State water quality standards,” antidegradation must be reflected in TMDL and load allocations.<sup>98</sup> That is, “[n]o waste load allocation can be developed or NPDES permit issued that would result in standards being violated” including antidegradation.<sup>99</sup> Thus, in relation to TMDLs, “existing uses must be protected . . . and in the case of waters whose quality exceeds that necessary” to meet the “goals of the [Clean Water] Act, an activity cannot result in a lowering of water quality unless the applicable public participation, intergovernmental review, and baseline control requirements of the antidegradation policy have been met.”<sup>100</sup>

Revisions to effluent limitations based on a TMDL or other waste load allocation may be revised only if: “the cumulative effect of all such revised effluent limitations based on such total maximum daily load or waste load allocation will assure the attainment of” water quality standards.<sup>101</sup> In addition, new discharges of pollutants of concern to impaired waters that will cause or contribute to violations of water quality standards are disallowed unless a TMDL has been established, sufficient waste load allocations are available to accommodate the new source, and all existing dischargers are subject to schedules of compliance to assure that the impaired

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These are waters that are too polluted or otherwise degraded to meet the water quality standards set by states, territories, or authorized tribes.”)

<sup>96</sup> EPA Water Quality Handbook – Antidegradation § 4.8.1; *See also* U.S. EPA, Impaired Waters and Total Maximum Daily Loads, <http://water.epa.gov/lawsregs/lawguidance/cwa/tmdl/index.cfm> (last visited May 10, 2013) (“The law requires that these jurisdictions establish priority rankings for waters on the [impaired water] lists and develop TMDLs for these waters.”).

<sup>97</sup> U.S. EPA, Impaired Waters and Total Maximum Daily Loads, <http://water.epa.gov/lawsregs/lawguidance/cwa/tmdl/index.cfm> (last visited May 10, 2013).

<sup>98</sup> EPA Water Quality Handbook – Antidegradation § 4.8.1.

<sup>99</sup> EPA Water Quality Handbook – Antidegradation § 4.8.1.

<sup>100</sup> EPA Water Quality Handbook – Antidegradation § 4.8.1.

<sup>101</sup> 33 U.S.C. § 1313(d)(4)(A). Effluent limitations based on TMDLs may otherwise only be revised if “the designated use which is not being attained is removed in accordance” with a use attainability analysis. *See id.*; 40 CFR 131.10(g).

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waters will be brought into compliance with applicable water quality standards,<sup>102</sup> which include and reflect antidegradation protections.<sup>103</sup>

2. NYS Antidegradation Policy

In accordance with the mandate of the CWA, New York State adopted an antidegradation polity on May 7, 1970, which received EPA approval on March 27, 1974.<sup>104</sup> On September 9, 1985, NYSDEC issued an Organization and Delegation Memorandum on Water Quality Antidegradation Policy, in which NYSDEC affirmed its “responsibility and obligation under . . . the Clean Water Act . . . to establish and implement a policy which protects existing water quality from being degraded,” and presented the statewide “policy by which [NYSDEC] . . . protects water quality against degradation.”<sup>105</sup> Antidegradation is a fundamental principle underlying NYSDEC’s implementation of its SPDES program.<sup>106</sup>

Consistent with CWA implementing regulations relating to Tier I antidegradation protection, NYSDEC’s antidegradation policy disallows the degradation of water quality below that which is necessary to preserve existing water uses. In particular, NYSDEC’s policy states that in all circumstances, “water quality will be adequate to meet the existing usage of a waterbody,” and that, for waters which are not meeting assigned standards, such waters “will be

<sup>102</sup> *Friends of Pinto Creek v. EPA*, 504 F.3d 1007, 1012-1013 (9th Cir. 2007).

<sup>103</sup> EPA Water Quality Handbook – Antidegradation § 4.8.1.

<sup>104</sup> Organization and Delegation Memorandum No. 85-40, Water Quality Antidegradation Policy (Sept. 9, 1985), at 1, *available at*, [http://www.dec.ny.gov/docs/water\\_pdf/togs139.pdf](http://www.dec.ny.gov/docs/water_pdf/togs139.pdf) (hereinafter “NYSDEC O&D Memo”).

<sup>105</sup> NYSDEC O&D Memo at 1. DEC subsequently issued a supplement to its statewide antidegradation in order to provide guidance on antidegradation of the Great Lakes System in relation to “Bioaccumulative Chemicals of Concern.” See Division of Water Technical and Operational Guidance Series 1.3.9 - Implementation of the NYSDEC Antidegradation Policy - Great Lakes Basin (Supplement to Antidegradation Policy dated Sept. 9, 1985) (Feb. 1998), *available at*, [http://www.dec.ny.gov/docs/water\\_pdf/togs139.pdf](http://www.dec.ny.gov/docs/water_pdf/togs139.pdf)

<sup>106</sup> See NYSDEC O&D Memo at 2 (“The antidegradation policy is implemented through a series of general and special laws such as . . . Article 17, Title 17 of the Environmental Conservation Law which specifically prohibits discharges into certain named rivers, streams, and lakes . . . . The State Pollutant Discharge Elimination System (SPDES) permit process serves the intended function of preventing degradation. SPDES permits include technology based and water quality based effluent limits derived from the water quality standards embodied in 6 NYCRR Parts 701-702. Each stream classification (AA, A, B, C, D, SA, SB, SC, SD, I) described in 6 NYCRR Parts 701-702 has specific standards and numerical criteria assigned thereto. The achievement of those criteria and standards assures that the best usage of each waterbody is protected.”).

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improved” and “water uses and the level of water quality necessary to protect such uses shall be maintained and protected.”<sup>107</sup>

NYSDEC’s antidegradation policy also echoes Federal Tier II antidegradation protection, stating that where waters “possess an existing quality which is better than the standards assigned thereto” “[t]he quality of these waters will be maintained unless” “allowing lower water quality is necessary to accommodate significant economic or social development in the affected areas;” *and* “water quality will be adequate to meet the existing usage of a waterbody when allowing a lowering of water quality.”<sup>108</sup> NYSDEC’s antidegradation also incorporates the Federal directive that “the highest statutory and regulatory requirements for all new point sources and costs effective and reasonable best management practices for non-point source control *shall* be achieved.”<sup>109</sup>

New and existing pollution sources in NYS must not run afoul of antidegradation requirements of the CWA as reflected in the state policy. Notably, New York’s ECL broadly prohibits any addition of materials to waters of New York State that would “*cause or contribute* to a condition in contravention of water quality standards,”<sup>110</sup> which encompass NYS’s antidegradation requirements.<sup>111</sup> Thus, new and existing pollution sources in NYS must not cause or contribute to violations of water quality, including those that would be disallowed as a result of NYSDEC’s antidegradation policy.

<sup>107</sup> NYSDEC O&D Memo at 1-2.

<sup>108</sup> NYSDEC O&D Memo at 1.

<sup>109</sup> NYSDEC O&D Memo at 2.

<sup>110</sup> NYSECL § 17-0501 (“[i]t shall be unlawful for any person, directly or indirectly, to throw, drain, run, or otherwise discharge into such waters organic or inorganic matter that shall *cause or contribute* to a condition in contravention of the standards by the department pursuant to section 17-0301” (i.e., the water classifications and corresponding usage and narrative standards)); *see, e.g., Atlantic States Legal Found. v. Eastman Kodak Co.*, 1993 U.S. App. LEXIS 35911 (2d Cir. N.Y. 1993) (“Water quality-based limits are established where the permitting authority reasonably anticipates the discharge of pollutants by the permittee at levels that have the *reasonable potential* to cause or contribute to an excursion above any state water quality criterion . . . .”) (emphasis added). Federal CWA implementing regulations contain a similar provision which states that no permit may be issued to a new source or a new discharger if the discharge from its construction or operation will cause or contribute to the violation of water quality standards. 40 C.F.R. § 122.4(i).

<sup>111</sup> *See PUD No. 1 v. Washington Dep’t of Ecology*, 511 U.S. 700, 705 (1994) (“state water quality standards include ‘a statewide antidegradation policy.’”).

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cont'd In sum, the issuance of a WQC for this project requires NYSDEC to perform antidegradation review for each waterbody that would be affected. The antidegradation policy is itself a New York State water quality standard, and it is thus the Company's obligation to demonstrate that the project would not result in degradation of waters of the State in violation of the antidegradation policy.<sup>112</sup> The DEIS and permit application are woefully insufficient for NYSDEC to perform such review in compliance with state and federal law.

CO42-27 C. *Public Interest Review*  
With respect to the public interest requirement set forth in Part 608,<sup>113</sup> the present project endangers not only the health, safety, and welfare of the people of the State of New York, but also the natural resources and character of the Northwest Catskills and Central New York State. Moreover, FERC and the Applicant have not established a public need for this project, as set forth in the Report on the Need for the Proposed Constitution Pipeline, which is hereby incorporated by reference into these Comments.<sup>114</sup>

CO42-28 D. *SEQRA*  
Based upon the insufficient record and missing information on the present WQC application and in the DEIS, it is clear that NYSDEC cannot rely on the DEIS for purposes of its own compliance with SEQRA.<sup>115</sup> In other words, there is no way that NYSDEC could presently make the certification required by SEQRA that "the action is one that avoids or minimizes adverse environmental impacts to the maximum extent practicable, and that adverse

<sup>112</sup> 6 N.Y. COMP. CODES R. & REGS. § 608.9(a).

<sup>113</sup> 6 N.Y. COMP. CODES R. & REGS. § 608.8.

<sup>114</sup> Anne Marie Garti, *Report on the Need for the Proposed Constitution Pipeline* (April 7, 2014), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140407-5237](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140407-5237), [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140407-5252](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140407-5252).

<sup>115</sup> 6 N.Y. COMP. CODES R. & REGS. § 617.15 (NYSDEC may only rely on FERC's NEPA EIS if it "is sufficient to make findings under section 617.11 of [SEQRA] . . .," and only after NYSDEC "has made the findings prescribed in section 617.11 of SEQRA).

CO42-27 The proposed projects' purpose and need is described in section 1.1 of the EIS, and this section has been updated with new information. See the response to comment CO42-27.

CO42-28 See the response to comment CO42-23.

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environmental impacts will be avoided or minimized to the maximum extent practicable . . . .<sup>116</sup>

It is questionable whether NYSDEC will ever be able to make this required finding in light of the short shrift given to the threshold question of need for the project and or alternative routes that would be far less destructive in the DEIS.

Accordingly, with respect to SEQRA compliance (*i.e.*, assuming *arguendo* that the Company could actually meet its burden of demonstrating compliance with all other obligations for it to obtain a WQC), one of two things would need to happen in order for NYSDEC to legally issue the WQC. First, FERC could prepare a supplemental DEIS, noticed for public comment, containing all of the required information for NYSDEC to make the required SEQRA findings. Second, NYSDEC could prepare its own Draft EIS in order to obtain and review necessary information that is lacking in FERC's DEIS.<sup>117</sup>

For all of these reasons, NYSDEC must deny the Company's application for a section 401 WQC. Since the WQC cannot legally be issued by NYSDEC, FERC's Certificate of Public Convenience and Necessity and the USACE section 404 permit must be denied as well.

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**VIII. CP's Application for a CWA Section 404 Permit Must Be Denied.**

As noted above, the USACE may not issue a CWA section 404 permit prior to NYSDEC's issuance of a certification that the project will not cause or contribute to violations of New York State water quality standards. Because that certification may not legally be issued by NYSDEC on the present record, the section 404 permit may also not legally be issued by the USACE.

Many of the issues described in the above WQC discussion section are also applicable to the question addressed in this section of whether a CWA § 404 permit should be granted to the Company for the project as it is presently proposed. As such, the above section of these Comments concerning the Company's WQC application is respectfully incorporated by reference into this section for consideration by the Corps.

<sup>116</sup> 6 N.Y. COMP. CODES R. & REGS. § 617

<sup>117</sup> 6 N.Y. COMP. CODES R. & REGS. §§ 617.11; 617.15(a).

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See the response to comment CO42-20. The COE will be responsible for determining whether to issue a Clean Water Act Section 404 permit.

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Before issuing a section 404 permit, the Corps must evaluate the proposed activity to confirm that it will comply with the Clean Water Act and its implementing regulations. The Corps accomplishes this through a two-tiered analysis that is at the heart of its permit evaluation process. First it must determine if the activity complies with the EPA's 404(b)(1) Guidelines. These Guidelines establish detailed environmental standards that must be met before a permit can be issued. If the proposed activity violates the Guidelines, the Corps *must* deny the permit.

Even if the proposed activity is found to comply with the 404(b)(1) Guidelines, the Corps must undertake a second analysis, under which it must determine whether the proposed activity is in the public interest, as defined by the Corps' own section 404 regulations. If the proposed activity would be contrary to the public interest, the Corps *must* deny the permit, even if the proposed activity meets the requirements of the 404(b)(1) Guidelines.

*A. EPA § 404(b)(1) Guideline Evaluation.*

Determining whether a permit application complies with EPA's Clean Water Act section 404(b)(1) Guidelines is the first step in the Corps' two-tiered Clean Water Act evaluation. Compliance with the 404(b)(1) Guidelines is mandatory, despite the "guideline" label, and the Corps must deny a permit if the proposed activity does not comply with the 404(b)(1) Guidelines. The 404(b)(1) Guidelines state that "dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated that such a discharge will not have an unacceptable adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystem of concern."<sup>118</sup> The 404(b)(1) Guidelines explicitly require the Corps to deny a § 404 permit in four situations:

1. A permit must be denied if there is a practicable alternative that will cause less harm.

The Corps' practicability alternatives analysis requires applicants for Section 404 permits to:

1. *Avoid* wetland impacts: No discharge shall be permitted if there is a practicable alternative with less adverse impact.

<sup>118</sup> 40 C.F.R. § 230.1(c) (2014). The 404(b)(1) Guidelines go on to provide guidance on evaluating the impacts of a proposed activity. The 404(b)(1) Guidelines are found at 40 C.F.R. Part 230 and can be accessed at <http://www.epa.gov/owow/wetlands/40cfr/>.

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2. *Minimize* wetland impacts: If impacts cannot be avoided, appropriate and practicable steps to minimize adverse impacts must be taken (e.g., project modifications).
3. *Mitigate* for unavoidable wetland impacts: Wetland mitigation includes the restoration, creation, enhancement, or in exceptional cases preservation of wetlands and/or other aquatic resources for the purpose of compensating for unavoidable impacts.<sup>119</sup>

A section 404 permit must be denied “if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem.”<sup>120</sup> “An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.”<sup>121</sup>

If an activity is not water dependent (as is clearly the case with the present project), the 404(b)(1) Guidelines create a legal presumption that practicable alternatives to the proposed activity are available that do not involve a special aquatic site. Special aquatic sites include wetlands, mud flats, and riffle and pool complexes that are deemed to be so ecologically valuable that their degradation or destruction may represent an irreversible loss of valuable aquatic resources.<sup>122</sup> Unless the applicant clearly demonstrates that a practicable alternative does not exist, the Corps must deny a permit that impacts a special aquatic site. This places a very high burden on the applicant to show that there are no practicable alternatives to the proposed activity.

An activity is water dependent if it requires access or proximity to a special aquatic site in order to fulfill the activity’s basic purpose.<sup>123</sup> For example, a gas pipeline is by definition not water dependent, because gas can be transported through a pipeline whether or not it is submerged in, or beneath, the water. A marina, on the other hand, likely will be water dependent. The present pipeline project is clearly not water dependent under the Corps’ regulations.

<sup>119</sup> Avoid/minimize/mitigate (in that order) is also known as proper “sequencing.” See 1990 Memorandum of Agreement between the COE and the EPA, *available at* <http://water.epa.gov/lawsregs/guidance/wetlands/mitigate.cfm>.

<sup>120</sup> 40 C.F.R. § 230.10(a) (2014).

<sup>121</sup> 40 C.F.R. § 230.10(a)(2).

<sup>122</sup> 40 C.F.R. § 230.1(d).

<sup>123</sup> 40 C.F.R. § 230.10(a)(3).



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Here, there are clearly practical alternatives to the project that would cause less harm. For example, in the absence of a demonstrated need, the no-action alternative would clearly cause less harm. Additionally, in light of the Company's failure to adequately consider alternatives, such as the I-88 median and other interstate gas pipeline easements, for pipeline collocation, it appears impossible for the Corps to find that FERC has satisfied these vital tests. (See *also* the discussion regarding HDD, in section VII A. above.)

2. *A permit must be denied if the discharge would violate certain laws and standards.*

A section 404 permit must be denied if the proposed discharge would (a) cause or contribute to violations of any state water quality standard; (b) violate any applicable toxic effluent standard or prohibition under Clean Water Act § 307; (c) jeopardize the existence of endangered or threatened species listed under the Endangered Species Act, or result in a likelihood of the destruction or adverse modification of formally designated critical habitat; or (d) violate any requirement imposed by the Secretary of Commerce to protect any marine sanctuary under the Marine Protection, Research and Sanctuaries Act.<sup>124</sup>

As noted in the discussion above with respect to the Company's WQC application, this project will indeed cause or contribute to violations of New York State water quality standards, and the Applicant has not provided sufficient information for NYSDEC or the Corps to determine that the project will not violate such standards. As such, the section 404 permit must be denied.

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3. *A permit must be denied if the discharge would cause or contribute to significant degradation of water quality.*

A § 404 permit must be denied if the discharge would cause or contribute, either individually or cumulatively, to significant degradation of protected waters. Significant degradation will be measured by significant adverse effects on (a) human health or welfare, including municipal water supplies, plankton, fish, shellfish, wildlife, and special aquatic sites; (b) life stages of aquatic life and other water-dependent wildlife; (c) aquatic ecosystem diversity, productivity, and stability, such as loss of fish and wildlife habitat or loss of the capacity of a

<sup>124</sup> 40 C.F.R. § 230.10(b).

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See the response to comment CO42-20 and CO42-29. As discussed in the EIS, we conclude that impacts on wetlands would be minimized where possible and would be mitigated (including locations where PFO wetlands would be converted to PEM or PSS over the long-term or permanently) in accordance with the COE guidelines where impacts are unavoidable.

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cont'd wetland to assimilate nutrients, purify water or reduce wave energy; and (d) recreational, aesthetic, and economic values.<sup>125</sup>  
Here, it is evident that such degradation will occur as a result of the proposed disturbance of approximately 90 acres of wetlands, many of them forested, in connection with this project.<sup>126</sup>

CO42-31 4. *A permit must be denied unless the applicant has taken steps to minimize harm to protected waters.*  
A § 404 permit must be denied if the permit applicant has not taken “appropriate and practicable” steps to minimize potential adverse impacts on the aquatic ecosystem.<sup>127</sup> Potential adverse impacts may be minimized by (a) the selection of the discharge location; (b) treating or limiting the material to be discharged; (c) controlling the material after it has been discharged and the method of dispersion; (d) utilizing technology to reduce impacts; and/or (e) avoiding interference with animals and their habitat.<sup>128</sup>  
Here, despite NYSDEC’s specific applicable BMPs requiring the use of HDD (i.e. a “technology to reduce impacts”), the Company continues to assert that it will use such technology for only a tiny percentage of the project’s stream and wetlands crossings. As such, the Applicant cannot rationally be found to have taken appropriate steps to minimize harm to protected waters.  
For all of these reasons, the section 404 permit application should be denied for failure to meet section 404(b)(1) Guidelines. Moreover, as explained below, even if the Corps were to determine that the Guidelines have been satisfied, it would still need to deny the permit application because the proposed project is demonstrably not in the public interest.

CO42-32 B. *The Corps’ Public Interest Review Evaluation*  
As with NYSDEC’s review of this project, federal law also requires the USACE to conduct a public interest review as part of its permit review process. The USACE must deny

<sup>125</sup> 40 C.F.R. § 230.10(c).

<sup>126</sup> See Hudsonia Report, Ex. 3, for detailed discussion of expected degradation of water quality and biota.

<sup>127</sup> 40 C.F.R. § 230.10(d).

<sup>128</sup> Additional detail on actions that can be taken to minimize adverse environmental impacts can be found at 40 C.F.R. §§ 230.70 to 230.77.

CO42-31 See the response to comments CO42-25 and CO42-29.

CO42-32 See the responses to comments CO42-27 (need), CO42-10 and CO42-18 (alternatives), and CO42-29 (the COE permitting review).

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permits for projects found to be contrary to the public interest. In this mandatory public interest review, USACE staff weigh the need for the wetland fill, against more than 20 social, economic and ecological factors to determine if the public benefits from a project will outweigh the harm done.<sup>129</sup> Thus, even when the Corps determines that a permit can be granted or a project can be approved under the EPA 404(b)(1) Guidelines, the Corps must still conduct the second tier of its Clean Water Act review. The Corps must deny a permit if granting the permit would not be in the public interest as defined by the Corps' regulations.<sup>130</sup>

Under its public interest review, the Corps must evaluate the "probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest."<sup>131</sup> The benefits that reasonably may be expected to accrue from the project must be weighed against its reasonably foreseeable detriments.<sup>132</sup>

The Corps' public interest review decision should reflect the national concern for both protecting and utilizing important resources, including protecting wetlands—a value explicitly recognized by the Corps' own regulations, which state that "wetlands constitute a productive and valuable public resource, the unnecessary alteration or destruction of which should be discouraged as contrary to the public interest."<sup>133</sup>

The Corps' public interest evaluation also must consider all factors that may be relevant, and the cumulative effects of those factors, including:

- Environmental factors such as conservation, wetlands, fish and wildlife values, water quality, floodplain management, water conservation, energy conservation, environmental benefits, and mitigation;

<sup>129</sup> See 33 C.F.R. § 320.4(a)(1).

<sup>130</sup> 33 C.F.R. §§ 320.4 and 323.6.

<sup>131</sup> 33 C.F.R. § 320.4(a).

<sup>132</sup> The Corps' § 404 regulations are found at 33 C.F.R. Parts 320 to 331, and additional policy guidance can be found at [www.usace.army.mil/CECW/Pages/reg\\_materials.aspx](http://www.usace.army.mil/CECW/Pages/reg_materials.aspx).

<sup>133</sup> 33 C.F.R. § 320.4(b). These regulations provide specific examples of many wetland functions that are important to the public interest. These include significant biological functions, including food chain production, general habitat, nesting, spawning and rearing areas, drainage, sedimentation and flushing functions; shielding of other areas from wave action; storage areas for storm and flood waters; ground water discharge areas, and water purification functions. 33 C.F.R. § 320.4(b)(2). The Corps' regulations further recognize that the cumulative effects of piecemeal wetland losses can result in a major impairment of wetland resources. 33 C.F.R. § 320.4(b)(3).

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- Cultural and economic factors such as historic, cultural, aesthetics, scenic and recreational values, general environmental concerns, water supply, development, navigation, and economics;
- The relevant extent of the public and private need for the proposed work;
- The practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed work, where there is a conflict as to the resource use; and
- The extent and permanence of the beneficial and/or detrimental effects the proposed work is likely to have on the public and private uses to which the area is suited.<sup>134</sup>

On the present record, it would frankly be impossible for the Corps to find the Company's burden under the public interest test has been satisfied. First, there is simply no legitimately demonstrated need for this project.<sup>135</sup> Second, alternative routes that would require far fewer wetland impacts, such as the use of the existing pipeline and highway easements, have not been adequately studied or considered by FERC. Third, the unprecedented public opposition to this project generally demonstrates that the project would have significant detriments upon the communities and ecosystems in the natural and rural areas through which the project would cross.

For all of these reasons, as well as those set forth in the preceding section concerning the Company's application for a WQC, the Corps should deny the application for a CWA section 404 permit.

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**IX. Best Management Practices (BMPs) and Environmental Construction Plans (ECPs) Do Not Ensure a Lack of Significant Impacts.**

In the DEIS, FERC repeatedly describes potential impacts of constructing the proposed pipeline, but quickly attempts to counter them by mentioning plans that would minimize the damage. For example, clearing 125-foot swaths of mature trees along many miles of steep slopes would unquestionably have long-term impacts. The issue is whether the proposed best management practices ("BMPs") and environmental construction plans ("ECPs") would be

<sup>134</sup> 33 C.F.R. § 320.4(a).

<sup>135</sup> Anne Marie Garti, *Report on the Need for the Proposed Constitution Pipeline* (April 7, 2014), available at [http://elibrary.FERC.gov/dmws/file\\_list.asp?accession\\_num=20140407-5237](http://elibrary.FERC.gov/dmws/file_list.asp?accession_num=20140407-5237), [http://elibrary.FERC.gov/dmws/file\\_list.asp?accession\\_num=20140407-5252](http://elibrary.FERC.gov/dmws/file_list.asp?accession_num=20140407-5252).

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The use of the best management practices as described in the EIS and Constitution's ECPs would serve as the basic framework for the prevention of potential impacts, such as erosion. The FERC compliance monitors would document that the projects are built in accordance with the required environmental specifications. The compliance monitoring program would inspect the project on a daily basis. A major goal of the program would be to prevent instances of noncompliance, rather than to respond after the fact for issues such as inadequate erosion and stormwater controls, improper seeding, and rutting.

The FERC has various ways to enforce compliance on a poorly performing project sponsor, including, but not limited to stop-work authority, fines, and consideration of granting or withholding project in-service based on whether restoration is proceeding satisfactorily. The performance of past projects is not necessarily an indicator of the performance of future projects, but the comments regarding issues with past projects that were located in the vicinity are noted. See the responses to comments FA4-53 (karst geology), CO1-5 (flooding), CO1-4 (stormwater runoff), and CO41-10 (soil compaction). Measures to prevent rutting, developed in coordination with the NYSDAM, are discussed in section 4.2.4 of the EIS.

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effective in minimizing indirect impacts, such as storm water run off.

A review of the Final EIS for the Millennium Pipeline may shed some light on this. A portion of the Millennium crossed Chenango, Broome, and Delaware Counties, near the proposed route for the “Constitution” Pipeline.<sup>136</sup> Therefore the subsurface, soil, flora, and topographical features of the two routes are similar. In addition, many of the same BMPs, ECPs, and other mitigation plans are mentioned in the Millennium FEIS as in the current DEIS, such as: (1) third party environmental inspectors who would report directly to FERC;<sup>137</sup> (2) in-stream sediment filters;<sup>138</sup> and (3) an extensive list of Environmental Construction Standards.<sup>139</sup>

In spite of the good intentions of listing best management techniques on paper, the construction of the Millennium Pipeline, through these three counties, was not successful from an environmental perspective. Even worse, bad practices apparently paid off. The pipeline company caused extensive damage and was issued hundreds of violations, yet it only paid minimal fines.<sup>140</sup>

If confronted by these facts, the Company might counter that it would do a better job than Millennium did. However, recent history does not support that contention as the Company has already been found in violation of the Clean Water Act.<sup>141</sup> In late 2013, while performing a geo-technical (boring) investigation, it filled a stream and wetlands without a permit. After this was reported to the NYSDEC and USACE, the wetlands were found to be under the jurisdiction of the USACE, and remediation plans were ordered to counter the violation of law. In addition, the Company's partners have some of the worst records of environmental violations in Pennsylvania.<sup>142</sup> Williams has an extensive record of explosions in its plants, pipelines, and

<sup>136</sup> FERC, Millennium Pipeline Project FEIS, CP98-150, B1, sheets 104-125 (October 2001).

<sup>137</sup> *Id.* at 2.3.

<sup>138</sup> *Id.* at 5.3.2.

<sup>139</sup> *Id.* at Appendix E1.

<sup>140</sup> Fritz Mayer, *Millennium Pipeline agrees to fine, other penalty*, RIVER REPORTER (March 5-11, 2009), available at <http://www.riverreporter.com/issues/09-03-05/head3-pipeline.html>.

<sup>141</sup> Amy L. Gitchell, USACE, Letter to Constitution Pipeline Company (Sept. 11, 2013). See Exhibit 6.

<sup>142</sup> Laura Legere, *DEP fined oil and gas companies \$2.5 million last year*, STATE IMPACT (Feb. 27, 2014), available at <http://stateimpact.npr.org/pennsylvania/2014/02/27/dep-fined-oil-and-gas-companies-2-5-million-last-year/>; PA DEP, Consent Order (April 5, 2013), available at <https://www.documentcloud.org/documents/1017799-williams-field-services-penalty-assessment.html>.

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compressor stations, and the potential environmental impacts of such events along the proposed route must be considered in this environmental review.<sup>143</sup> Cabot, whose name is synonymous with the water contamination in Dimock, Pennsylvania, also has a history of extensive environmental violations.<sup>144</sup>

The public is quite aware that “mitigation” in the real world follows a “break it, patch it, and pay a minor penalty” model, not the BMPs and ECPs described on paper. This is not a surprise considering that someone can be deemed qualified to be an Environmental Inspector if they are “someone working under the direct supervision of a qualified professional.”<sup>145</sup> It seems that an eighteen-year old summer intern would qualify under these standards, which does not inspire a lot of confidence in the process. A resident recently characterized FERC’s use of the term mitigation as “Orwellian.”<sup>146</sup> Common sense, and years of living on the land, have taught these people much more about the local environment than all the consultants in the world will ever know. Their collective knowledge is accumulating in FERC’s docket, as comments on various aspects of the DEIS. These include: (1) skepticism that anyone will actually enforce the rules;<sup>147</sup> (2) the need to consider the cumulative effects of the long-term change in regional weather patterns;<sup>148</sup> (3) acknowledgement that prompt seeding isn’t enough to counter mudslides;<sup>149</sup> and (4) experience shows the soils are too wet to stop deep ruts.<sup>150</sup>

Because of the generic nature of its DEIS, FERC ignores the profound implications of

<sup>143</sup> Kerry Lynch, Comment (March 18, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140318-5041](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140318-5041).

<sup>144</sup> Irwin Waldman, *Pipeline company doesn't fear fines*, DAILY STAR (July 5, 2013), *available at* <http://www.thedailystar.com/letters/x691118951/Letters-to-the-Editor-July-5-2012>.

<sup>145</sup> Draft Resource Reports, Vol II, Att 00, NY ECP Document, 48-49 (Nov. 12, 2013), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20131112-5073](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20131112-5073).

<sup>146</sup> Eugene Marner, Comment (April 2, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140402-5148](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140402-5148).

<sup>147</sup> Eugene Marner, Comment (March 21, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140321-5146](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140321-5146).

<sup>148</sup> Thomas Gorman, Comment (March 27, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140327-5004](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140327-5004); Mary Colleen McKinney, Comment (April 4, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140404-5176](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140404-5176).

<sup>149</sup> Caroline Martin, Comment (March 28, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140328-5248](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140328-5248).

<sup>150</sup> Eugene Marner, Comment (March 27, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140327-5105](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140327-5105).

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where this project would be built. The ridges of the geologic uplift, called the Catskill Mountains, are filled with undulations, and frequently lined with clay. These features tend to keep the soil moist, and create microclimates with distinct ecosystems. In Schoharie County, there is a subsurface of porous limestone, called karst.<sup>151</sup> In addition, there can be a substantial amount of precipitation in the area, which is why New York City built its large reservoirs in this part of New York State. However, with global warming, the area's abundant rainfall has become a liability as it causes extensive flooding, and the turbidity that accompanies these floods threatens the area's water quality.<sup>152</sup> This dirty water does not stay within FERC's 300-foot study area, but rushes downhill, and downstream, as fast and as far as gravity can carry it. Many streams that were ripped open by floods a few years ago still have not recovered their prior healthy habitats.

The underlying geology, soil conditions, historic weather patterns, and climate change could create unexpected problems, both during and after the construction of the proposed pipeline. Anyone who has experienced any of the four recent floods knows that the best management and environmental plans described in the DEIS would be completely inadequate in an actual deluge. When five inches of rain fall on saturated soil in less than ten hours, no amount of straw will hold it back. People in these communities have watched houses, trucks, and roads wash away.<sup>153</sup> They know there is no way to stop the force of water, especially when you remove the trees that now hold the soil in place. Cutting trees on steep slopes, and digging up their roots, sounds like an act of total madness to anyone who has lived through these ravaging rainstorms.

Similarly, if large construction vehicles are allowed on this wet land, rutting and soil compaction would be inevitable. Destroying the soil would lead to ecosystem degradation and a hostile takeover by invasive species. People who live in the area know this, because they experience the relationship between weather patterns and soil and water conditions day by day, year after year. They understand that FERC's best-laid plans would not alter these realities.

<sup>151</sup> Center for Sustainable Rural Communities, Comment (March 20, 2013), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140320-5046](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140320-5046).

<sup>152</sup> Sebastian Malo, *Sandy stirs up trouble for city drinking water*, THE NEW YORK WORLD (March 6, 2013), *available at* <http://www.thenewyorkworld.com/2013/03/06/sandy-drinking-water/>.

<sup>153</sup> Daniel Brignoli, Comment (March 21, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140324-5081](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140324-5081).

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### CO42-34 X. The Purpose of this Project is to Find a Market for an Excess Supply of Gas

FERC states that an evaluation of need for the project is not a concern of this environmental review, and only comes into play as the Commission decides whether or not to grant a certificate of public convenience and necessity.<sup>154</sup> This position reveals a grave misunderstanding by FERC of its role as the lead agency. The DEIS can be relied on by other agencies and Native American Tribes, and must comply with other laws, not just the Natural Gas Act. If these agencies are going to use FERC's DEIS to make their decisions, then it must include all of the information and analyses required by those laws. For example, a complete analysis of the need for the project is required under both the Clean Water Act and SEQRA.<sup>155</sup> If FERC does not perform a needs analysis according to those standards, then the involved agencies will be forced to either deny their certificates and permits, or perform their own environmental reviews.

The brief description about the need for the project appears to misrepresent the truth, which raises the possibility of fraud as the Company's application was submitted under oath.<sup>156</sup> Instead of questioning the Company's position, FERC appears to accept it at face value. The DEIS includes many statements that the market for this gas is in New York City and New England, even though the proposed pipe goes north, away from the purported markets, instead of east, towards them.<sup>157</sup> At the proposed terminus, in Wright, NY, the project would interconnect with the Iroquois and Tennessee Pipelines. Neither of these pipes is capable of transporting the gas from the proposed project to the target markets because both of them are congested, particularly in the winter months when gas might be needed in New England.<sup>158</sup> Instead of a

<sup>154</sup> DEIS at 1-1.

<sup>155</sup> US EPA, Scoping Comment (Oct. 16, 2012), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20121016-0039](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20121016-0039); USACE, Scoping Comment (Oct. 9, 2012), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20121009-5285](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20121009-5285).

<sup>156</sup> Constitution Pipeline Company, LLC, *Application for Certificate of Public Convenience and Necessity*, pdf p. 25 (June 13, 2013), available at [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20130613-5078](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20130613-5078).

<sup>157</sup> DEIS at 3-2.

<sup>158</sup> Levitan and Associates, Inc., *NYCA Pipeline Congestion and Infrastructure Adequacy Assessment, New York Independent System Operator*, 60, 62, 66, 77 (Sept. 2013), available at [http://www.nyiso.com/public/webdocs/markets\\_operations/committees/bic\\_egwg/meeting\\_materials/2013-10-23/Levitan%20Pipeline%20Congestion%20and%20Adequacy%20Report%20Sep13%20-%20Final%20CEII%20Redacted.pdf](http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_egwg/meeting_materials/2013-10-23/Levitan%20Pipeline%20Congestion%20and%20Adequacy%20Report%20Sep13%20-%20Final%20CEII%20Redacted.pdf).

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See the responses to comments CO26-18, CO42-23, CO42-27, and CO42-29. See the response to comment FA4-46 regarding the Leatherstocking Gas Company. The status of Constitution's ongoing effort to obtain easement agreements is noted.

If an easement cannot be negotiated with the landowner and the projects are certificated by the Commission, the Applicants may use the right of eminent domain to acquire the workspace necessary to construct the projects. The Applicants would still be required to compensate the landowner for the right-of-way and damages incurred during construction.

The potential impacts of the projects upon property insurance, including our recommendation to ensure that any impacts are mitigated, and mortgages are discussed in sections 4.9.6 and 4.9.5 of the EIS, respectively. These sections have been updated for the final EIS.



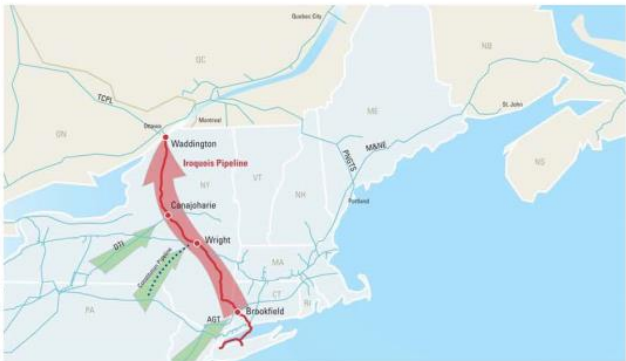
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going to New York City and New England, it appears a consortium of gas and pipeline companies have worked out a master plan to move U.S. shale gas to Canada. From there it can be exported overseas. Based on these facts, FERC must correct its misrepresentation of the market destination in its DEIS.



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FERC also discusses potential local use of gas in communities along the proposed route, but that possibility appears to be more of a public relations ploy than an indication of actual need.<sup>160</sup> Leatherstocking Gas Company has admitted that only 0.3 to 0.6% of the total gas conveyed in the proposed pipeline would be used locally.<sup>161</sup> This insignificant amount of possible local use is not sufficient to justify the impacts of the proposed project, particularly the taking of private property through eminent domain proceedings. It is almost certain that hundreds of eminent domain proceedings would have to be initiated if the proposed pipeline receives a

<sup>159</sup> *South-to-North Open Season Brochure*, IROQUOIS, 1 (Dec. 2013), available at <http://www.iroquois.com/documents/SoNoOSBrochureFinal.pdf>.

<sup>160</sup> Bob Rosen, Comment (March 13, 2014), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140313-5032](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140313-5032).

<sup>161</sup> Nixon Peabody LLP on behalf of Leatherstocking Gas Company LLC, *Answer in Opposition to the Motion for Extension of Time*, 5, Fn 8 (March 31, 2014), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140331-5183](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140331-5183).

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certificate of public convenience and necessity. To get a sense of the opposition, one should review the history and current status. The Company began negotiating easement agreements in the fall of 2012.<sup>162</sup> Based on records in the Office of the Delaware and Schoharie County Clerks, approximately 70% of the landowners in Delaware County, and 60% of the landowners in Schoharie County, have not signed an easement agreement with the Company, as of January 28, 2014.<sup>163</sup>

Many of the directly affected landowners consider FERC's process to be a violation of their property rights – government sanctioned theft for private profit – and have submitted comments to FERC stating they will not sign an easement agreement.<sup>164</sup> They know they would bear the costs of increased insurance rates and bear the risks of not being able to obtain a mortgage.<sup>165</sup> They understand how much of what is meaningful on their property would be lost, with no consideration by FERC of their site-specific impacts.<sup>166</sup> The community at large also knows that the pipeline company would reap the benefits while they pay the financial and social costs for years to come.<sup>167</sup>

In order for FERC to justify the significant impacts the project would have on landowners, the surrounding community, and the environment, the need for the gas must be

<sup>162</sup> Constitution Pipeline Co., LLC, *Project Schedule and Activity Update*, 3, UPDATE (August 2012), [http://constitutionpipeline.files.wordpress.com/2012/08/constitution-landowners-newsletter\\_august20121.pdf](http://constitutionpipeline.files.wordpress.com/2012/08/constitution-landowners-newsletter_august20121.pdf).

<sup>163</sup> These two counties encompass well over half the length of the proposed pipeline route. DEIS at 2-4.

<sup>164</sup> See, e.g., Robert Lidsky, Comment (April 3, 2014) *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140403-5078](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140403-5078); Anthony Macaluso, Comment (March 24, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140324-5106](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140324-5106); Walter Denton, Comment (March 24, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140324-0031](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140324-0031).

<sup>165</sup> See, e.g., Mary C. McKinney, Comment (March 28, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140328-5277](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140328-5277); Kerry Lynch, Comment (March 28, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140324-5020](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140324-5020).

<sup>166</sup> See, e.g., Philip Hulbert, Comment (March 18, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140318-5003](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140318-5003); Julie M Wawrzyniec, Comment (March 24, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140324-5017](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140324-5017); James E. Bixby, Comment (March 25, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140325-0033](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140325-0033).

<sup>167</sup> See, e.g., Ronald Bailey, Comment (March 28, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140328-5256](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140328-5256); Lisa Lerner, Comment (March 27, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140327-5152](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140327-5152); Janice Cragnolin, Comment (March 28, 2014) *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140328-5008](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140328-5008).

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great.<sup>168</sup> Exporting it to Canada does not tip the balance in favor of granting a certificate of public convenience and necessity. Nor do exports justify the filling of wetlands under the Clean Water Act and 33 C.F.R. § 320.

For a complete analysis on the need for the project, please see Anne Marie Garti's *Report on the Need for the Proposed Constitution Pipeline*.<sup>169</sup> It, and all of the documents on which it relies, are hereby incorporated by reference into these comments.

### CO42-35 XL FERC's Analysis Shows an Inherent Bias

Most affected landowners, adjoining landowners, and members of the surrounding community believe FERC's process is rigged. Their suspicions were confirmed when the DEIS came out, and FERC accepted the Company's assumptions and goals as their own. One of the first comments on the DEIS discussed FERC's use of a consultant pre-selected by the applicant.<sup>170</sup> Cardno Entrix is particularly troubling because it played a similar role in the Keystone XL Pipeline, which triggered an investigation by the United States Department of State because of its extensive business relationships with TransCanada.<sup>171</sup> Similar concerns are warranted in this project because of the plan by Canada to import a substantial amount of US shale gas, which would enable the use of TransCanada's Mainline as a conduit for the export of tar sands oil.<sup>172</sup>

<sup>168</sup> 88 F.E.R.C. P61,227, 61,745 - 61,746 (Sept. 15, 1999).

<sup>169</sup> Anne Marie Garti, *Report on the Need for the Proposed Constitution Pipeline* (April 7, 2014), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140407-5237](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140407-5237), [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140407-5252](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140407-5252).

<sup>170</sup> Kerry Lynch, Comment (Feb. 21, 2014) available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140221-5040](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140221-5040).

<sup>171</sup> United States Department of State, Special Review of the Keystone XL Pipeline Permit Process, Report Number AUD/SI-12-28 (Feb. 2012), available at <http://www.sanders.senate.gov/imo/media/doc/Keystone%20Final%20Report%20020912.pdf>.

<sup>172</sup> Anne Marie Garti, *Report on the Need for the Proposed Constitution Pipeline* (April 7, 2014), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140407-5237](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140407-5237), [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140407-5252](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140407-5252).

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The FERC staff makes the selection of the third-party contractor, not the applicant. The FERC contractor is not "pre-selected" by the applicant. In regard to the Keystone XL Pipeline EIS, the U.S. Department of State (DOS) Office of the Inspector General (OIG) found in February 2012 that there was no evidence that the applicant improperly influenced the DOS selection of Cardno ENTRIX as the third-party contractor and that there were no contractual or financial relationships between Cardno ENTRIX and the applicant that would result in a conflict of interest or that would impair the ability of Cardno ENTRIX to be objective in performing the work assigned (DOS 2012). See the responses to comment IND4.

U.S. Department of State, Office of the Inspector General. 2012. Special Review of the Keystone XL Pipeline Permit Process. Report Number AUD/SI-12-28, February 2012.

The photos on the cover of the EIS were taken by the FERC staff during field visits to the project area and depict a mix of rural, agricultural, and forested lands that would be impacted.

Section 3 of the EIS examines alternatives including alternate pipeline routes and configurations, alternate terminal points, collocation with existing pipelines and I-88, as well as renewable and non-renewable energy sources.

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FERC’s choice of images on the front cover of the DEIS makes its bias obvious.<sup>173</sup> The manipulated aerial photograph makes it appear as if the topography in the area is flat, or gently rolling, and filled with open pastures. The insert photos paint a deceptive picture of two pipelines blending into, and through, a pastoral landscape. The messages of those images couldn’t be further from the truth. The proposed route is slated for the tops of ridges, many with steep slopes down to the Susquehanna and Schoharie river valleys. Over 1000 of the 1862 directly impact acres are of forests, and twenty-eight percent of the route would be up, down, or across steep slopes. Digital manipulation of aerial images may fool Commissioners in Washington, DC, but not the people who live and work in the area.

FERC’s bias also appears as conclusory statements, which are determinations made without the support of evidence, or made without the requisite hard look.<sup>174</sup> Three examples of this are (1) FERC’s acceptance of the Company’s position that Wright, NY must be the terminus of the proposed pipeline;<sup>175</sup> and (2) FERC’s refusal to study the I-88 median as an alternative;<sup>176</sup> and (3) FERC’s refusal to study collocation with existing pipeline easements running toward the purported target markets.<sup>177</sup> There are many other examples of inherent bias, including (1) no consideration of the build-out of renewables in the purported market areas;<sup>178</sup> and (2) no analysis of an “all of the above” strategy as an alternative to a new gas pipeline.<sup>179</sup>

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### XII. FERC Glosses over Impacts and Ignores its own Policies and Regulations

FERC’s own regulations state that steep slopes and forested areas are to be avoided, and collocation encouraged.<sup>180</sup> Hidden within the DEIS, and the underlying draft resource reports,

<sup>173</sup> See, e.g., Kerry Lynch, Comment (March 14, 2014), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140314-5002](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140314-5002); Robert Lidsky, Comment, (March 19, 2014), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140319-5102](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140319-5102).

<sup>174</sup> *Maryland-National Capital Park and Planning Commission v. U.S. Postal Service*, 487 F.2d 1029, 1040 (D.C. Cir. 1973); *Town of Orangetown v. Gorsuch*, 718 F.2d 29, 35 (2d Cir. 1983).

<sup>175</sup> DEIS at 3-13.

<sup>176</sup> DEIS at 3-31. (The discussion is covered in a single paragraph.)

<sup>177</sup> DEIS at § 3.3.

<sup>178</sup> DEIS at § 3.1.2.3.

<sup>179</sup> *Id.*

<sup>180</sup> 18 C.F.R. §§ 380.15(a), (d)(2), (d)(3) (2014).

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Impacts on forest (section 4.5, appendix M) and surficial bedrock due to blasting (section 4.1.3.7 and 4.1.3.8, appendix I), as well as system and collocated alternatives (sections 3.2, 3.3, and 3.4) are discussed within the EIS. See the response to comment CO2-1 regarding Section 380.15(b) of the Commission’s siting guidelines. The EIS clearly acknowledges forested impacts, including miles crossed, acres cleared, and percent collocated. The data are not in any way “hidden.”

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are facts, which, when added up, show that the proposed project would require the razing of about a thousand acres of forest. Thirty-six miles would go through interior forested areas, which amounts to 29% of the entire route. Over thirty-five miles would go up, down and across steep slopes and side slopes. A mere 9% would be collocated with existing easements. Therefore this proposed route is in direct contradiction to FERC's own policy, yet nowhere, in the entire 945 pages of the DEIS, is that point made.

The proposed project would also cross over forty-five miles of bedrock, yet nowhere in the DEIS are the potential impacts of jackhammering and blasting on aquatic life mentioned. To an objective observer, it appears that FERC is desperately trying to hide what would actually happen if this pipeline were to be constructed.

CO42-37

**XIII. FERC's Analysis is Riddled with Double Standards**

In FERC's DEIS, assumptions and standards shift, depending on whether they bolster or weaken the argument for the proposed pipeline. For example, in the alternatives section, the land use requirements for generating solar and wind power are calculated as impacts. However, the land needed for gas drilling pads, access roads and gathering lines are not considered in the comparative analysis. If the land use is calculated on one side of the comparison, it needs to be calculated on the other side as well.

Any time FERC does not like an idea, it calls it "speculative," but does not apply the same standard to concepts that support the construction of the pipeline. For example, FERC dismisses the potential build out of gas drilling along the length of the proposed pipeline as speculative, even though it would pass above two known shale plays. However, the potential distribution of gas to local communities is touted as proof of the need for the proposed pipeline, even though the franchise agreements with ten municipalities along the proposed route are not binding, and most of the villages and towns have extremely low population densities that cannot possibly underwrite the cost of laying the pipes to and through their communities.<sup>181</sup> If non-

<sup>181</sup> Bob Rosen, Comment (March 13, 2014), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140313-5032](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140313-5032); Anne Marie Garti, *Report on the Need for the Proposed Constitution Pipeline* (April 7, 2014), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140407-5237](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140407-5237), [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140407-5252](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140407-5252).

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See the response to comments CO26-10, CO26-11, and FA4-45. Section 3.1 of the EIS indicates that if the no-action alternative were selected, then other energy sources would have to be used to meet customer demand potentially including "other fossil fuels and renewable energy." See the responses to comments CO26-16 and CO32-1.

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binding agreements are considered speculative in one scenario, then they must also be considered speculative in the comparative situation. Similarly FERC describes the Atlantic Offshore Wind Energy Consortium as speculative, but its own unverified assumption that the no action alternative "might result in greater reliance on alternative fossil fuels, such as coal or fuel oil, or both" is treated as gospel truth.<sup>182</sup> In the revised DEIS, FERC should drop the double standards it uses to reach its conclusions.

CO42-38

#### XIV. The Size of Study Areas is Arbitrary and Capricious

FERC offers no justification for the size of the study areas used in the DEIS. Surveys for biological and cultural resources were conducted within a 300-foot corridor, 150 feet on either side of the proposed pipeline. An explanation of why this width was chosen is not in the DEIS. However, it is stated that in 2012 the study area was twice as wide, and then reduced in 2013.<sup>183</sup> While FERC doesn't state the reason for this sudden, and seemingly arbitrary, decrease in the width of the study area, one can presume it's because a very high proportion of landowner were denying, or rescinding, access to their land for surveys. In addition to the dramatic decrease in the size of the study area, it appears the Company is using accounting tricks to try to hide how many parcels of land are not being surveyed within the narrow study area. This manipulation of data takes place by **not counting** adjoining parcels of land that are within 150-feet of the proposed pipeline, but are not in the construction zone. Evidence in support this theory can be found in the notations located at the top of the alignment sheets ("denied survey access"), which only apply to directly affected landowners, not adjoining parcels.<sup>184</sup> Therefore, it appears as if the Company has been engaged in accounting tricks to deliberately mislead agencies into thinking that a higher percentage of parcels have been surveyed than actually have been. (See section V C.)

The study area for bald eagle nests was a quarter of a mile on both sides of the proposed route, even though nesting sites could suffer from the impact of blasting a half a mile away. (See

<sup>182</sup> DEIS at ES-10, 3-8.

<sup>183</sup> DEIS at 4-59.

<sup>184</sup> Draft Resource Reports, Appendix H (Nov. 12, 2013), available at [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20131112-5073](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20131112-5073).

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The FERC does not prescribe the width of the study corridor for proposed projects; rather the applicant does typically in coordination with resource agencies, in particular the state historic preservation offices. Typically, the applicant selects a study corridor that allows it some flexibility to make minor adjustments to the proposed route in order to avoid a localized resource (such as a well) without having to return a survey crew to the field. Otherwise, if the study corridor is too narrow to allow such flexibility, then additional, subsequent field surveys may be required to assess minor route variations if needed. The comment regarding the number of parcels that have been surveyed as well adjoining parcels within the survey corridor that have not been surveyed is noted. The FERC does not make decisions based on the number of parcels surveyed. See the response to comment CO42-15 regarding the bald eagle. Typically, field assessments downstream and downhill of the survey corridor are not required. See the response to comment LA10-3 regarding the identification of wells within 150 feet of construction and a source reference.

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conf'd sections III B. and V D.) Study areas for aquatic plants and animals were not expanded downhill, or downstream, of the proposed route, even though construction impacts could reasonably be expected to flow in those directions.<sup>185</sup> Finally, the DEIS states that water wells would be tested if they are within 150 feet of the of proposed construction site. Yet no study is cited to justify this arbitrary standard.

### CO42-39 XV. FERC's Conclusions are not Supported by Sufficient Evidence

The data and information collected by the Company, and then incorporated by FERC in the DEIS, is incomplete. One reason for this is that almost all of the land within the study areas is privately owned, and has never been open to the public. Therefore, the Company's request for information from public institutions, whether from a town or a county planning department, or a state or federal agency, cannot result in accurate information. These government bodies repeatedly state they do not have complete information, and the disclaimers in their correspondence to the Company are proof of insufficient evidence to support findings. For example, in regards to water supplies:

The Otsego County Planning Department wrote, "The information presented is only as valuable as the resources it was derived from and not to be inclusive."<sup>186</sup>

The Delaware County Planning Department wrote, "The information in the table was derived from the general location maps provided and as a result the data accuracy is limited."<sup>187</sup>

The Schoharie County Planning Department wrote that all records prior to September 2011 were destroyed in a flood.<sup>188</sup>

<sup>185</sup> See, e.g., Hudsonia Report, Exhibit 3; Otsego County Conservation Association, Comment (March 28, 2014), available at [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20140328-5176](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20140328-5176); Christine R. Eckerson, Comment (March 21, 2014), available at [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20140321-5015](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20140321-5015).

<sup>186</sup> Otsego County Planning Department, Letter to AECOM, Draft Resource Report 2, Attachment A, PDF 207-209, (Oct. 31, 2012), available at [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20131011-5203](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20131011-5203).

<sup>187</sup> Delaware County Planning Department, Letter to AECOM, Draft Resource Report 2, Attachment A, PDF 212-217, (Nov. 5, 2012), available at [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20131011-5203](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20131011-5203).

<sup>188</sup> Schoharie County Planning Department, Letter to AECOM, Draft Resource Report 2, Attachment A, PDF 218, (Nov. 5, 2012), available at [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20131011-5203](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20131011-5203).

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Information can only be obtained if it is available or accessible. Applicants typically contact local, state, and federal agencies in the project planning phases to obtain as much background information as available. The background data are then supplemented or verified through field surveys where access is provided. Where access is denied, field surveys must be completed after the issuance of a Certificate, if granted. See the response to comment FA4-3.

Threatened and endangered species are discussed in section 4.7 of the EIS. See also the response to comment FA4-37. Invasive species are discussed in section 4.5.4 of the EIS, and see the response to comment FA4-9. As stated in section 2.3.1 of the EIS, Constitution would use a padding machine to ensure that rocks mixed with subsoil do not damage the pipe. The EI would be responsible for approving imported soils and verifying that the soil is certified free of noxious weeds and soil pests (unless otherwise specified by the landowner) as stated in 2.5.2 of the EIS.

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Chenango County Department of Public Health stated, "Chenango County at this time does not regulate, track, or monitor private wells and cannot speak to the potential impact of the pipeline to any private water systems."<sup>189</sup>

Broome County Health Department: "It is unknown how many private water supplies are within 0.25 miles of the proposed modified alignment since the Broome County Health Department does not keep such records. . . ."<sup>190</sup>

United States Environmental Protection Agency: "[T]his Office does not maintain a database of private water supply sources."<sup>191</sup>

With so many government agencies admitting that they do not have sufficient data in their records to meet NEPA and SEQRA standards, and many of the properties in private control and inaccessible, it is logistically impossible for FERC, or the Company, to have compiled the required information on surface and ground water resources that would be impacted if this project were move forward.

This lack of public information also applies to endangered species, including where they are located, and where surveys were and were not conducted. For example, in the NYSDEC's letter to the Company's consultants, it was stated:

This report only includes records from the NY Natural Heritage databases. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. This information should not be substituted for onsite surveys that may be required for environmental impact assessment.<sup>192</sup>

However, in direct contradiction to this disclaimer, the Company relied on the data given to it by government agencies, such as the NYSDEC, to determine what species it would and would not look for along what routes. In many instances, the time of year that surveys took place were not appropriate for finding vulnerable species that had not been specifically identified. In addition,

<sup>189</sup> Chenango County Department of Public Health, Letter to AECOM, Draft Resource Report 2, Attachment A, PDF 281, (May 5, 2013), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20131011-5203](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20131011-5203).

<sup>190</sup> Broome County Health Department, Letter to AECOM, Draft Resource Report 2, Attachment A, PDF 292, (May 6, 2013), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20131011-5203](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20131011-5203).

<sup>191</sup> US EPA, Letter to AECOM, Draft Resource Report 2, Attachment A, PDF 350, (June 13, 2013), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20131011-5203](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20131011-5203).

<sup>192</sup> Nicolas Conrad, NYSDEC, Letter to AECOM, (Oct. 16, 2012). This letter is included as an attachment to the Hudsonia Report.



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downstream impacts were totally ignored. Finally, FERC admits that 24% of the parcels have not been surveyed at all, and that percentage may actually be much higher. In light of the missing data, survey limited to specific species, and lack of access to a substantial number of properties, the DEIS is incomplete and must be revised once the required surveys have been performed at the proper times of the year.

The United States Department of the Interior and Fish and Wildlife Service (“USFWS”) requested a thorough analysis of all possible alternatives as a way to avoid impacts on endangered and threatened species.<sup>193</sup> USFWS warned that introduction of invasive species, by opening up of previously continuous forest areas, would threaten native species. This concern is particularly acute when outside material is introduced into native habitats, as would be required along the route as Catskill soils are notoriously rocky, and the pipeline needs to be protected from sharp objects like stones.<sup>194</sup> FERC acknowledges that rocks would have to be removed from the existing soil, but does not mention where replacement soil would come from, or how seeds and root fragments would be removed from it.

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**XVI. FERC’s cumulative impacts analysis is inherently flawed as it is based on erroneous assumptions**

A cumulative impact analysis that is sufficient for FERC, under NEPA,<sup>195</sup> may not meet the requirements of other agencies. If this environmental review is to serve as the basis for the USACE’s 404 permit, then it must meet the standards required under Clean Water Act § 404(b)(1), 40 CFR, Part 230, and 33 CFR § 320.4(a). If it is to serve as the basis for the NYSDEC’s 401 water quality certificate and permits, then it must also comply with SEQRA. The current DEIS falls short on all fronts, for it does not even meet the basic NEPA definition:

Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a

<sup>193</sup> FWS, Scoping Comment (Oct. 5, 2012), available at [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20121005-5132](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20121005-5132).

<sup>194</sup> DEIS §§ 2.3.1, 4.2.2.2.

<sup>195</sup> 40 C.F.R. § 1508.7 (2014).

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See the responses to comments CO42-23, CO42-24, and CO42-29 regarding agency permitting. The definition of cumulative impacts is noted. See the response to comment FA4-46 regarding the Leatherstocking Gas Company. See the responses to comments FA4-45 and CO26-10 regarding development of the Marcellus Shale and our updates to the cumulative impacts section of the EIS. See the response to comment CO26-7 regarding the capacity of the Constitution pipeline and its ability to serve as a major conduit for natural gas supplies developed in New York. See the response to comments LA7-5 and CO42-7 regarding the purpose and need for the proposed projects.

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period of time.

Nowhere in the current DEIS are incremental impacts assessed, as they must be. FERC touts Leatherstocking's taps to deliver gas locally as a justification of the need for the project, but totally ignores the impacts of the construction of a local distribution system. Nor does it consider the induced development from the availability of this new source of energy. It also ignores the shale gas extraction that is likely to follow in the wake of this pipeline, especially given the EPA's new green completion rule.<sup>196</sup> NYSDEC is also likely to require connecting to a pipeline prior to the completion of a well.

In addition to possibly enhancing the completion by preventing formation damage, having a pipeline in place when a well is initially flowed would reduce the amount of gas flared to the atmosphere during initial recovery operations. This type of completion with limited or no flaring is referred to as a reduced emissions completion (REC).<sup>197</sup>

These rules would encourage hydraulic fracturing well pads to be built close to existing pipelines as costs would be lower. Once reserves are proved, the drilling would spread to areas further away.

FERC tries to dismiss the need to study these impacts by stating New York State has a moratorium, and would regulate gas drilling. This is a misunderstanding of both the current status in New York, and of FERC's requirements as lead agency. Gas drilling is allowed in New York State, and could be expanded dramatically at any moment. In addition, as pointed out above, NEPA, and other laws, require that it be studied. Leatherstocking has also argued that its local distribution networks are outside the scope of this environmental review, and that future impacts would be regulated by the New York State Public Service Commission.<sup>198</sup> To make that claim, Leatherstocking ignores the cumulative impact requirements of NEPA, which demand an assessment of the "reasonably foreseeable" activity in **this** environmental review. Local

<sup>196</sup> Karen Borman, EPA Delays Hydraulic Fracturing Green Completion Rule Until 2015, RIGZONE (April 18, 2012), available at [http://www.rigzone.com/news/article.asp?a\\_id=117050](http://www.rigzone.com/news/article.asp?a_id=117050).

<sup>197</sup> DEC, *Revised Draft Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program*, 8-13 (Sept. 2011), available at <http://www.dec.ny.gov/energy/75370.html> [hereinafter 2011 Revised Draft SGEIS].

<sup>198</sup> Nixon Peabody LLP on behalf of Leatherstocking Gas Company LLC, *Answer in Opposition to the Motion for Extension of Time* (March 31, 2014), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140331-5183](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140331-5183).

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distribution of gas, growth inducement / industrial development, and hydraulic fracturing are not only reasonably foreseeable, they are explicitly mentioned by the promoters of this project as a justification for moving forward.<sup>199</sup>

Williams, a partner in the Company, is already positioning itself to gather gas in New York State. In a recent filing with the NYS Public Service Commission, Williams stated:

Williams ownership of upstream interests in Laser and DMP is a significant part of Williams broader strategy to develop the gathering and processing infrastructure required for successful development of the Marcellus Shale in New York and Pennsylvania.<sup>200</sup>

The Company's partners have also told their investors that the proposed project would allow them to drill for gas along the route in the future. The phrase Williams used in its presentation is "access to abundant new shale supply sources."<sup>201</sup> Williams also stated that the "Constitution" Pipeline would give them "Opportunities to serve: ... industrial / petrochemical, LDCs, [and] LNG exports".<sup>202</sup> Therefore, each one of those must be studied as part of the cumulative impact of the proposed pipeline.

<sup>199</sup> Joe Mahoney, *Pipeline would send gas to Amphenol, towns*, DAILY STAR (March 19, 2014), available at <http://www.thedailystar.com/localnews/x1387873940/Pipeline-would-send-gas-to-Amphenol-towns>.

<sup>200</sup> Williams Field Services, Petition for Approval to NYSPSC, 4 (Feb. 7, 2013), available at <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={543877AE-3417-4535-8864-B3EA878498D2}>.

<sup>201</sup> Williams, *Williams Analyst Day*, slide 20 (May 22, 2012), available at <http://www.b2i.us/Profiles/Investor/Investor.asp?BzID=630&from=dl&ID=136006&myID=136006&L=-i&Validate=3&I=->.

<sup>202</sup> Id.

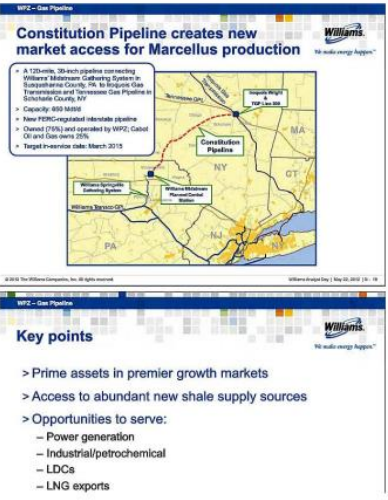
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The NYSDEC recognized the potential impacts of constructing a new transmission line above two shale gas formations, and asked that the environmental impacts of both local use of gas, and the extraction of gas along the route, be reviewed. The agency stated that the parameters described in its revised draft Supplemental Generic Environmental Impact Statement be used in the pipeline's EIS.

[T]he Applicant must evaluate whether the Project would be reasonably available for supply and distribution for communities along the Project route and whether the Project could reasonably serve as a collector line for additional supply from New York Marcellus and Utica Shale formations. Since the location of the proposed Project route has a high potential for development of natural gas extraction from Marcellus and Utica Shale formations, as indicated in the revised NYSDEC draft Supplemental Generic Environmental Impact Statement on the

<sup>203</sup> Williams, *Williams Analyst Day*, slide 20 (May 22, 2012), available at <http://www.b2i.us/Profiles/Investor/Investor.asp?BzID=630&from=dl&ID=136006&myID=136006&L=&Validat=3&L=>.

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Oil, Gas and Solution Mining Regulatory Program, September 7, 2011, the draft EIS must evaluate the cumulative environmental impacts associated with these potential activities.<sup>204</sup>

NYSDEC's rDSGEIS includes many discussions that need to be incorporated into FERC's DEIS. These include, but are not limited to:

The dSGEIS concludes that high-volume hydraulic fracturing operations would have a significant impact on the environment because such operations have the potential to draw substantial development into New York, which would result in unavoidable impacts to habitats (fragmentation, loss of connectivity, degradation, etc.), species distributions and populations, and overall natural resource biodiversity. Habitat loss, conversion, and fragmentation (both short term and long-term) would result from land grading and clearing, and the construction of well pads, roads, pipelines, and other infrastructure associated with gas drilling.<sup>205</sup>

Gas transmission pipelines of various sizes would necessarily be cut through the watersheds, often in straight lines and down hills in a manner that can accelerate and channelize water during precipitation events.<sup>206</sup>

Habitat loss, conversion, and fragmentation (both short-term and long-term) would result from land grading and clearing, and the construction of well pads, roads, pipelines, and other infrastructure associated with gas drilling.<sup>207</sup>

Well pads in Pennsylvania occupy 3.1 acres on average while the associated infrastructure (roads, water impoundments, pipelines) takes up an additional 5.7 acres, or a total of nearly 9 acres per well pad (Figure 6.5).<sup>208</sup>

Invasive species may be transported with the fresh water withdrawn for, but not used for drilling or hydraulic fracturing. Invasive species may potentially be transferred to a new area or watershed if unused water containing such species is later discharged at another location. Other potential mechanisms for the possible transfer of invasive aquatic species may include trucks, hoses, pipelines and other equipment used for water withdrawal and transport.<sup>209</sup>

<sup>204</sup> Patricia Desnoyers, NYSDEC, Preliminary Comments (July 17, 2013), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20130717-5290](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20130717-5290).

<sup>205</sup> 2011 Revised Draft SGEIS at ES – 14.

<sup>206</sup> *Id.* at 6-50.

<sup>207</sup> *Id.* at 6-68.

<sup>208</sup> *Id.* at 6-76.

<sup>209</sup> *Id.* at 6-88.

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[L]arge contiguous forest patches are especially valuable because they sustain wide-ranging forest species, and provide more habitat for forest interior species.<sup>210</sup>

Property values could also be affected by the impacts associated with developing natural gas resources.<sup>211</sup>

The potential for visual impacts from other new landscape features associated with the horizontal drilling and hydraulic fracturing process, such as interconnections with natural gas pipelines, was also considered in the STCs Marcellus Tourism Study (Rumbach 2011). This study suggested that potential impacts from the creation of new pipeline-rights-of-way might result in changes in vegetation patterns, primarily through the creation of new and visible corridors, particularly where forest would be removed. In addition, the study considered the potential for cumulative visual impacts of multiple well sites and associated off-site facilities across a relatively large area such as the STC region (which is comprised of Steuben, Schuyler, and Chemung counties). The overall conclusion of the STCs Marcellus Tourism Study was that cumulative visual impacts of multiple well sites and their associated off-site facilities may result from the creation of an industrial landscape that is not compatible with the current scenic qualities that are recognized for the STC region (Rumbach 2011).<sup>212</sup>

A number of local residents and groups have also called for a review of a full build out of hydraulic fracturing, including the need for compressor stations along the proposed pipeline.<sup>213</sup>

These studies are missing, and must be included in a revised DEIS.

Finally, as discussed in the report on the need for the project, constraints within the pipeline system inhibit the ability to transport gas to either New England or New York City.<sup>214</sup> If those locations are, in fact, the target markets, then the impacts of building new pipelines to carry gas to the southeast and northeast from Wright, NY must be included in this environmental review. An example of one such project is the recently announced Tennessee Gas Pipeline

<sup>210</sup> 2011 Revised Draft SGEIS at 6-91.

<sup>211</sup> *Id.* at 6-251.

<sup>212</sup> *Id.* at 6-282-283.

<sup>213</sup> Center for Sustainable Rural Communities, Comment (March 20, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140320-5046](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140320-5046); John Miglietta, Comment (March 24, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140324-5024](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140324-5024); Thomas Gorman, Comment (March 27, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140327-5016](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140327-5016); Otsego 2000, Comments (April 4, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140404-5164](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140404-5164).

<sup>214</sup> Anne Marie Garti, *Report on the Need for the Proposed Constitution Pipeline* (April 7, 2014), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140407-5237](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140407-5237), [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140407-5252](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140407-5252).

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Northeast Expansion Project.<sup>215</sup>



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### XVII. FERC's Analysis of Alternatives is Arbitrary and Capricious

NEPA's analysis of alternative is considered the "heart of the environmental impact statement" and "should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public. . . ."<sup>216</sup> FERC is also mandated to: (1) "Rigorously explore and objectively evaluate all reasonable alternatives. . ."; and (2) "Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits."<sup>217</sup> FERC fails to take a "hard look" at legitimate alternatives and does not provide a reasoned elaboration for rejecting the alternatives that were not considered in the DEIS.<sup>218</sup>

<sup>215</sup> Northeast Expansion Project Open Season, KINDER MORGAN, available at [http://www.kindermorgan.com/business/gas\\_pipelines/east/neupopenseason/](http://www.kindermorgan.com/business/gas_pipelines/east/neupopenseason/).

<sup>216</sup> 40 C.F.R. § 1502.14 (2014).

<sup>217</sup> *Id.* at §§ 1502.14(a), (b).

<sup>218</sup> *Id.* at §§ 1502.14(c).

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A description of unmet need for natural gas in the region is discussed in section 3.1 of the EIS. Section 3.1 of the EIS also indicates that if the no-action alternative were selected, then a combination of other energy sources would have to be used to meet customer demand potentially including "other fossil fuels and renewable energy." Renewable energy sources are discussed in section 3.1.2.3 of the EIS.

The FERC staff reviews applications for interstate natural gas pipeline projects in accordance with an applicant's stated objective(s) in order to disclose the environmental impacts of a proposal to inform the decisionmakers and, in accordance with NEPA, evaluate reasonable alternatives to a project. However, the FERC as a matter of policy and in accordance with the Natural Gas Act and other governing regulations does not direct the development of the gas industry's infrastructure regionally or on a project-by-project basis. As such, the FERC staff's evaluation of reasonable alternatives does not include setting project objectives, determining what an applicant's objective "should" be, nor does it include redefining the objectives of a Project. This does not mean that the FERC staff cannot recommend a modification to a project or a different routing option; however, the FERC staff's review is based on ensuring that any modifications or alternatives it recommends in the EIS would meet the applicant's stated objective(s). The Commissioners at the FERC ultimately have the authority to evaluate the merits of a project's objective and either approve the proposal, with or without modification, or decide to not approve the Project. Alternative originating or delivery points that do not meet the Project's objectives would not be viable. Should the Commission decide that a project is not in the public convenience and necessity, it would deny the project (in effect, selecting the no-action alternative) versus designing or recommending a new project with different objectives.

A discussion of alternative M, including the possible routing the pipeline within the median of I-88 was provided in section 3.4.1.2 of the draft EIS. System and collocated alternatives (sections 3.2, 3.3, and 3.4) are discussed in adequate detail within the EIS.

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FERC’s no action alternative starts with the assumption that more gas is needed, but provides neither current market data of that need, nor proof that the gas would, in fact, be transported to New York City or New England.<sup>219</sup> Nor does FERC discuss the recent expansion of gas pipelines to those target markets, even though its own eLibrary is the largest and most comprehensive source of that information.<sup>220</sup> Instead, FERC’s analysis of alternatives reinforces its reputation as a promoter of natural gas. For example, nowhere in its discussion of “non gas alternatives” does FERC consider a combination of supplies and solutions, such as conservation and a mix of renewables.<sup>221</sup> Instead, each alternative is individually compared to the amount of gas that would be delivered in this pipe. As noted above, FERC compares the impacts of producing other forms of energy to the impacts of delivering gas that has already been produced, which is contrary to NEPA’s requirements. Also, even though the gas is supposed to be consumed in New York City and New England, the possibilities of rooftop solar panels, geothermal, biomass, or other options for energy generation in or near those urban areas are not considered. Finally, when FERC discusses the Atlantic Offshore Wind Energy Consortium, a wind project that could compete with fracked gas, it brushes it off as mere speculation.

FERC also assumes that the project must start in Susquehanna County, Pennsylvania, and end in Wright, NY, calling those points “crucial” to the analysis.<sup>222</sup> Nowhere in the DEIS is this justified. Reasonable options are dismissed with conclusory statements, simply declaring that such options are infeasible. Two examples are FERC’s dismissal of placing the proposed pipeline in the median of I-88, or collocating it with existing interstate gas pipelines that run towards New York City. For the system alternatives that are studied, no detailed side-by-side comparisons are made, as required under NEPA. For all of these reasons, FERC must revise the DEIS with supporting documentation, the study of additional alternatives, and detailed comparisons.

<sup>219</sup> Anne Marie Garti, *Report on the Need for the Proposed Constitution Pipeline* (April 7, 2014), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140407-5237](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140407-5237), [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20140407-5252](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20140407-5252).

<sup>220</sup> *Id.* at 19-22.

<sup>221</sup> DEIS at § 3.1.

<sup>222</sup> *Id.* at 3-13.



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CO42-42 **XVIII. FERC’s DEIS Fails to Respond to Substantive Comments Made by Agencies, STP and the Public**

A number of federal agencies made substantive comments during the pre-filing and filing phases of this project that have been ignored by FERC. For example, the USEPA asked for “[a] full discussion of the purpose and need of the proposed project, quantifying energy demand and the need for such facilities in the region”, but such information cannot be found in FERC’s DEIS.<sup>223</sup> The USACE requested “an evaluation of the probable and cumulative impacts on the public interest”, but information needed for its twenty-factor test has not been included.<sup>224</sup> USFWS stated, “water quality data should be collected so that potential impacts can be determined, and also to serve as baseline data to compare with post construction conditions should unexpected adverse impacts occur.”<sup>225</sup> This data collection did not take place.

Pages upon thousands of pages of scoping and other comments have been totally ignored by FERC. Following is a list of issues STP requested be studied in its comments on the scope of work. Each one of them was to be reviewed for direct, indirect, and cumulative impacts.

A. *FERC failed to conduct a full impact analysis on the reasonably foreseeable development of natural gas development in New York State.*

The specific requests from STP that have been ignored include:

- Inclusion of impacts from a complete build-out of gas drilling wells;
- Complete analysis of whether a real need for gas exists in the northeast market;
- Impacts on the surrounding area based on the establishment of heavy industry.<sup>226</sup>

CO42-43 B. *FERC failed to include a robust analysis of the need for the project.*

<sup>223</sup> USEPA, Scoping Comment (Oct. 16, 2012), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20121016-0039](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20121016-0039).

<sup>224</sup> USACE, Scoping Comment (Oct. 9, 2012), *available at* [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20121009-5285](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20121009-5285).

<sup>225</sup> USFWS, Scoping Comment (Oct. 5, 2012), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20121005-5132](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20121005-5132).

<sup>226</sup> STP, Scoping comments, 6-8 (Oct. 9, 2012), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20121009-5263](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20121009-5263).

CO42-42 Purpose and need are discussed in section 1.1 of the EIS. A description of unmet need for natural gas in the region is discussed in section 3.1 of the EIS. The EIS contains an evaluation of the probable and cumulative impacts of the proposed projects, including the 20 factors listed by the COE in its 2012 letter where applicable. See the response to comment CO42-20.

Given that waterbodies would be crossed with either dry or trenchless construction methods, adverse impacts on water quality are not anticipated as discussed in section 4.3.3 and we conclude that pre-construction testing of surface waters is not necessary.

See the responses to comments FA4-45 and CO41-23.

CO42-43 See the response to comments LA7-5, CO42-7, and CO42-42. An analysis of the recoverable reserves of natural gas in the Marcellus Shale, the holdings of Cabot Oil and Gas and Southwestern Energy, and projected regional supply of natural gas are beyond the scope of this EIS.

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CO42-43  
cont'd For this project to go forward, FERC must show the public need for the construction of the project. STP requested that FERC analyze the recoverable reserves in Pennsylvania and New York; the holdings of Cabot Oil and Gas and Southwest Energy in the project area; total demand of natural gas in the northeast; projected retail demand of natural gas in the northeast; projected supply of natural gas for the northeast, as well as many other factors.<sup>227</sup>

CO42-44 C. *FERC failed to include a legal analysis of the use of eminent domain.*  
FERC states that the pipeline would serve markets in New York City and New England, but the existing pipelines are congested, and Iroquois has announced plans to reverse the flow of gas in its pipe to Canada. Since FERC lacks the authority to certify an interstate pipeline for export, a legal analysis of the use of eminent domain is required.<sup>228</sup>

CO42-45 D. *FERC failed to study collocation on routes that lead to the purported market.*  
FERC regulations require the use of existing easements as a way to avoid forested areas, steep slopes, and places with scenic, historic, wildlife, and recreational value. FERC is not following its own rules in this DEIS.<sup>229</sup>

CO42-46 E. *FERC failed to discuss impacts from the initial compressor station.*  
Compressor stations are required to move gas through a 124-mile long high-pressure pipeline, yet none is being studied at the start of the proposed project. The impacts of the Williams Central Compressor Station must be included in the DEIS.<sup>230</sup>

CO42-47 F. *FERC failed to provide an integrated environmental review.*  
STP requested an integrated analysis of environmental impacts, which has not been

<sup>227</sup> STP, Scoping comments, 9-11 (Oct. 9, 2012), available at [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20121009-5263](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20121009-5263).

<sup>228</sup> *Id* at 11-14.

<sup>229</sup> *Id* at 14-17.

<sup>230</sup> *Id* at 18.

CO42-44 See the responses to comments CO26-18 and CO42-34. We disagree that a legal analysis of the use of eminent domain is required to be included in the EIS.

CO42-45 System and collocated alternatives (sections 3.2, 3.3, and 3.4) are discussed in adequate detail within the EIS. See also the response to comment CO2-1.

CO42-46 See the response to comment CO41-29.

CO42-47 See the responses to comments FA1-1 and CO42-23.

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CO42-47 cont'd	provided in the DEIS. <sup>231</sup>
CO42-48	<p>G. <i>FERC failed to consider impacts on future uses of resources.</i></p> <p>STP requested that the integration of surface and ground water, and future uses of resources, such as springs and aquifers, be taken into account. The DEIS treats surface and groundwater as distinct, and only considers current uses.<sup>232</sup></p>
CO42-49	<p>H. <i>FERC failed to take a holistic look at ecosystems.</i></p> <p>FERC describes the impacts to a few individual species in the DEIS, but failed to properly analyze how impacts might effect ecosystems as a whole.<sup>233</sup></p>
CO42-50	<p>I. <i>FERC failed to consider the socio-economic costs to communities.</i></p> <p>The proposed pipeline would impact entire communities, not just individual landowners. While FERC mentions the economic benefits, it does not adequately review the negative consequences, such as shifting of land use patterns, inability of homeowners to obtain insurance policies or mortgages, decreased tax assessments, damaged roads, and the loss of residents and businesses that desire or depend on a clean, non-industrial setting.<sup>234</sup></p>
CO42-51	<p>J. <i>FERC failed to perform a study of land use patterns and laws.</i></p> <p>STP requested an analysis of land use patterns within fifty miles of the proposed pipeline, but the data has not been compiled even though the Company corresponded with all of the affected town and county planning boards.<sup>235</sup> An EIS is supposed to “discuss any inconsistency of a proposed action with any approved State or local plan and laws.”<sup>236</sup> This DEIS is deficient for failing to do so.</p>
<p><sup>231</sup> STP, Scoping Comments, 2 (Nov. 9, 2012), available at <a href="http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20121109-S196">http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20121109-S196</a>.</p> <p><sup>232</sup> <i>Id.</i> at 2-3.</p> <p><sup>233</sup> <i>Id.</i> at 3-4.</p> <p><sup>234</sup> <i>Id.</i> at 4-5.</p> <p><sup>235</sup> <i>Id.</i> at 5.</p> <p><sup>236</sup> 40 C.F.R. 1506.2(d) (2014).</p>	

CO42-48

Groundwater and surface water resources (and wetlands) are discussed in separate sub-sections for organizational purposes, but we recognize the potential for their interconnection and assessment of the resources occurs throughout the EIS, including how upland erosion control is important to the protection of water resources. The discussion regarding the Clinton Street Ballpark Aquifer in section 4.3.2.1 of the EIS, which includes surface water and groundwater interaction, has been revised.

CO42-49

The proposed projects’ impacts on ecosystem relationships, the network between and among living organisms and the non-living components of their environment, are discussed in the EIS. An example includes the relationships of wildlife to their habitats (sections 4.5, 4.6, and 4.7 of the EIS).

CO42-50

Land use is discussed in section 4.8 of the EIS. Insurance, mortgages, and property values are discussed in section 4.9 of the EIS, and this section has been updated with additional information. FERC staff engaged in independent research regarding insurance and mortgage issues raised during scoping (see section 4.9 of the EIS). As stated in section 4.9.4.1 of the EIS, Constitution would repair any roads damaged by the project. See the response to comment CO41-23 regarding the potential for induced development of heavy industry. .

CO42-51

Section 4.8 of the EIS describes potential impacts on lands owned or managed by federal, state, or local agencies, planned developments, and compliance with special governmental programs such as the Conservation Reserve Enhancement Program, Clean and Green Program, and New York designated 480 and 480a Real Property Tax eligible lands.

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- CO42-52 | K. *FERC failed to study the costs and impacts of providing gas service to the area.*  
STP requested a study of the costs and impacts of establishing infrastructure necessary for local distribution of gas, but FERC did not provide such data.<sup>237</sup>
- CO42-53 | L. *FERC failed to perform an adequate historic and cultural resources review.*  
The DEIS does not present sufficient historical information or offer methods of preserving historic and archaeological artifacts that may be located beneath the surface of the earth.<sup>238</sup>
- CO42-54 | M. *FERC failed to generate images, or otherwise depict the impact on viewsheds.*  
The proposed pipeline would pass up, down and across large tracts of pristine forests. The DEIS does not include renderings, or geographic information system data, to show the impacts on views.<sup>239</sup>
- CO42-55 | N. *FERC failed to discuss the exportation of gas to Canada.*  
Huge investments are currently being made to export shale gas from the United States to Canada. Even though STP requested that FERC study this, there is not a single mention of it in the DEIS. This is particularly troubling, as the Iroquois pipeline has already announced plans to export the gas it receives from the proposed “Constitution” pipeline to Canada.<sup>240</sup>
- CO42-56 | O. *FERC failed to consider whether the new intrastate pipelines could supply local gas in place of constructing a new pipeline.*  
FERC includes Leatherstocking’s business plans in the DEIS, but does not analyze alternative ways for towns to get gas service. Those alternatives must be added to the revised DEIS.<sup>241</sup>

<sup>237</sup> STP, Scoping Comments, 6 (Nov. 9, 2012), available at [http://elibrary.FERC.gov/idmws/File\\_list.asp?accession\\_num=20121109-5196](http://elibrary.FERC.gov/idmws/File_list.asp?accession_num=20121109-5196).

<sup>238</sup> *Id.*

<sup>239</sup> *Id.* at 7.

<sup>240</sup> *Id.*

<sup>241</sup> *Id.*

CO42-52 | See the response to comments FA4-44 and FA4-46.

CO42-53 | Cultural and historical resources are discussed in section 4.10 of the EIS. Some sensitive cultural resources information is not disclosed to the public in order protect those resources from vandalism. This information has been analyzed by, and is on record with the Commission as privileged and confidential information.

CO42-54 | Potential visual impacts, including scenic byways, are discussed and described in section 4.8.6 of the EIS.

CO42-55 | See the response to comments LA7-5 and CO26-18.

CO42-56 | See the response CO42-41. The FERC does not direct the development of the gas industry’s infrastructure regionally, on a project-by-project basis, or at the local distribution level. While the delivery of natural gas to local users is possible through other means, such as an alternative supply pipeline and another local distribution company (other than Leatherstocking Gas Company) or by truck delivery of compressed natural gas, we are not aware of any such plans and conclude that such options are not reasonably foreseeable or practical alternatives at this time.

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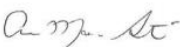
**IXX. Conclusion**

The DEIS on the proposed “Constitution” Pipeline fails to provide required information, documents and analyses, is unacceptably generic, filled with bias and unwarranted assumptions, and does not take the requisite hard look required under NEPA. Proceeding to a final EIS, without issuing a revised draft EIS would be the very definition of arbitrary and capricious behavior, as FERC has stated in countless locations throughout the DEIS that it needs to review material that is missing in this version before construction can begin. Government agencies, municipalities, and the public must be afforded the same opportunity as the lead agency.

Respectfully submitted,



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Legal Volunteer

/s/ Jonathan Panico  
Legal Intern

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See the responses to comments FA1-1.

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**COMPANIES AND ORGANIZATIONS**

**CO42 – Stop the Pipeline (cont’d)**

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CO42-58

Exhibit 1

Missing Documents

CO42-58      See the responses to comments FA1-1 and FA4-3. The Pace Environmental Law Litigation Clinic, Inc.’s comment letter was filed (corrected version) on April 8, 2014. Constitution filed supplemental information on February 7, March 14 and 26, April 7, May 6, and June 3 and 19, 2014 that was not included in the draft EIS. We have also developed new information for the final EIS independent of the Applicants. We have reviewed and incorporated this new information where appropriate and conclude that we have adequate information to proceed with issuance of the final EIS.

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CO42-58 cont'd	<p><u>FERC admitted in the DEIS that the following material still needs to be completed.</u></p> <p><b>I. Executive Summary</b></p> <p><b>A. Geology and Soils</b> “The primary effect of construction ... would be disturbances to steep topographic features...” [3] “A well-defined landslide feature was identified ..., for which Constitution intends to perform a formal slope stability analysis.” (Not done.) [3] “geotechnical feasibility studies ... we have not received the results of all of the investigations.” [3]</p> <p><b>B. Groundwater, Waterbody Crossings, Water Use, and Wetlands</b> “Constitution has not, however, completed identifying water wells and springs within 150 feet of the proposed pipeline and contractor yards.” Recommend – do it before construction. [4]  Describe impacts to waterbodies impacted by construction – not by crossing. (Not done.) [4]  Fill wetlands for roads. FERC wants justification. (Not done.) [5]</p> <p><b>C. Vegetation, Wildlife, Fisheries, and Federally Listed and State-Sensitive Species.</b>  “recommending that Constitution develop an Upland Forest Mitigation Plan” (Not done.) [5]  3 bald eagle nests. 2 within half a mile of blasting. [5] “We are recommending that Constitution ... develop mitigation for nests that may be close to areas requiring blasting, and finalize a bald eagle mitigation plan.” (Not done.) [5]  Water withdrawals. Need 22.7 million gallons for hydrostatic testing. [5] Unknown if need permit from NYS DEC. When, where, how much not specified. [5]</p> <p><b>D. Land Use and Visual Resources</b> “more accurately classify currently unsurveyed structures” (Not done.) [7]</p> <p><b>E. Cultural Resources</b> “[W]e are recommending that the Applicants not begin construction until any additional required surveys are completed, survey reports and treatment plans (if necessary) have been reviewed by the appropriate parties, and we provide written notification to proceed.” [8]</p> <p><b>F. MAJOR CONCLUSIONS</b> list: FERC will complete ESA and Section 106 of NHPA later. (Not done.) CP has to develop forest and migratory bird mitigation plan. (Not done.)</p>
Missing Documents	1

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-58  
cont'd

### II. Section 1. Introduction

#### 1.2 Purpose and Scope of EIS

Surveys: surveyed 534 of 707 = 76% of parcels = 94 miles (of 124).  
30 miles = 24%. (Not done.)

### III. Section 2. Project Description

**2.4 Construction Schedule.** [2-28] In service date of March 2015.  
No construction schedule included

### IV. Section 4 Environmental Analysis

#### A. 4.1.1.2 Geotechnical Investigations for the Trenchless Crossings

"Studies for the remaining nine sites are either on-going or not started due to lack of site access."  
TABLE 4.1.1-3 specifies location and status  
FERC recommends they be done prior to construction. (not part of DEIS)

#### B. 4.1.3.4 Landslides

TABLE 4.1.3-2

Identified Measures for Steep Slopes Associated with the Constitution Pipeline Project  
Partial access at 3 locations; no access at 4<sup>th</sup> location  
An area with high potential for landslide activity – formal slope stability study not completed.

#### C. 4.3.1.5 Water Supply Wells and Springs

"However, Constitution has not completed identifying water wells and springs within 150 feet of construction workspaces in Pennsylvania due to changes in Constitution's proposed route."

#### D. 4.3.2 Aboveground Facilities and Contractor Yards

"As of issuance of this draft EIS, Constitution has surveyed three of the six contractor yards for water wells."

#### E. 4.3.2.1 Groundwater General Impact and Mitigation

Blasting. "Constitution has committed to contacting affected landowners again regarding the location of any wells or springs just prior to the start of construction so that a comprehensive list of these features can be compiled."

#### F. 4.3.3.1 Existing Surface Water Resources

Used desktop sources where access was denied.

**G. Pipeline Facilities.** NY. "In addition to these 207 waterbodies, another 40 are within the construction right-of-way, but not crossed by the trenchline directly."

Missing Documents



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## CO42 – Stop the Pipeline (cont’d)

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**H. Aboveground Facilities and Contractor Yards**

Surveys and designs not completed.

**I. Access Roads**

Site specific plans for crossing waterbodies, justification of fill, and agency consultations not completed.

**J. 4.3.3.5 Waterbody Construction Procedures**

Dry Crossing Method and Trenchless Crossing Methods include cross references to

**2.3.2.2 Waterbody Crossings** The status is incomplete for all entries in table.

**K. Waterbodies Within Workspaces** - no info on waterbodies impacted in construction ROW

**L. Hydrostatic Testing and Dust Control** –no permit applications have been filed with NYS DEC, DRBC, SRBC. No information on the location of withdrawals, time of year, or quantity of withdrawal per stream location.

**M. 4.3.3.6 General Impacts and Mitigation**

**HDD Crossings** – geotechnical investigations not done. (§ 4.1)

**Access Roads** – insufficient detail of waterbody crossings and filling in of waterbodies

**N. 4.4.1 Existing Wetland Resources**

where survey access was denied, they used desktop maps to determine the location of wetlands.

**O. 4.4.1.3 Contractor Yards** –surveys for 3 of 6 contractor yards not done.

**P. 4.4.1.4 Access Roads** – FERC wants justification for permanently filling wetlands. Not done.

**Q. 4.4.2 Wetland Construction Procedures** – what they are going to do where is not specified. They'll decide in the field at the time of construction.

**R. 4.4.5 Compensatory Mitigation** – The wetland mitigation plan is based on an assessment, because 30 miles of the route hasn't been surveyed yet. The NY mitigation plan is under review.

**S. 4.5.1 Existing Vegetation Conditions – Access Roads**

"Prior to the end of the draft EIS comment period, Constitution should file a description of its proposed access roads leading to the two proposed meter stations; maps depicting the access roads; tabulated impacts on vegetation types; and any proposed impact avoidance, minimization, or mitigation measures."

**T. 4.5.3 Interior Forest Habitat**

"Prior to the end of the draft EIS comment period, Constitution should file with the Secretary a draft Upland Forest Mitigation Plan developed in consultation with the FWS, the NYSDC, the PADCNr, and the Pennsylvania Game Commission. The draft plan should also include a discussion of migratory birds, including specific locations and mitigation (such as, but not limited to, further reducing the construction right-of-way width, replanting temporary workspaces, and reducing the maintenance clearing width of the permanent maintained right-of-way). The proposed clearing activities outside of agency-recommended clearing windows should also be addressed in relation to migratory birds."

Missing Documents

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## CO42 – Stop the Pipeline (cont’d)

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CO42-58 cont'd	<b>U. 4.5.4 Noxious Weeds and Other Invasive Plant Species</b> Invasive plant surveys not completed. Access denied.
	<b>V. 4.6.1.2 Sensitive or Managed Wildlife Habitats</b> <i>Cannonsville/Steam Mill Area IBA</i> Upland Forest Mitigation Plan is not done. Should address impacts to migratory birds.
	<b>W. 4.6.1.3 Migratory Birds</b> Upland Forest Mitigation Plan is not done. FERC says it should address impacts to migratory birds for “the proposed limited tree clearing outside of the recommended window.”
	<b>X. 4.7.3 Bald Eagles @ 4-100</b> No information regarding whether the third identified eagle’s nest is occupied. Need to develop a mitigation plan for the impacts on eagles during blasting. Must re-survey entire route and modify for new nests (proposed for early 2014)
	<b>Y. Bats @ 4-102</b> Require a mitigation plan for impacts on endangered bat species.
	<b>Z. Timber Rattlesnake @ 4-103</b> Requires a mitigation plan for impacts on timber rattlesnake habitat.
	<b>AA. 4.8.1.1 Access Road @ 4-109</b> Undetermined impacts from proposed construction of access roads to meter stations and cathodic protection.
	<b>BB. 4.8.1.5 Access Road Crossings @ 4-114</b> Information is required on the permanent fill that will be applied for access road crossings in-stream.
	<b>CC. 4.8.1.3 Unsurveyed Structures @ 4-118</b> Twelve unsurveyed buildings exist on properties the Company has not gained access to. The buildings will be impacted by the pipeline. Additionally, a confirmation is need on the distance and location of the subdivision at MP 99.3 with a site specific plan.
	<b>DD. 4.8.3.2 Subdivision Plan @ 4-120</b> A residential crossing plan is required for the proposed subdivision at MID 121.5.
	<b>EE. 4.8.4.2 Organic Farm Lands @4-125/126</b> The Company should revise its Organic Farm Protection Plan to include the required use of organic straw/hay for mulch in certified organic agricultural land.  Constitution should file an impact mitigation plan for specialty crops in coordination with the land owner when possible.

Missing Documents

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**FF. 4.8.4.3 Special use Lands @ 4-130**

Mitigation measures designed to ensure the pipeline and access road PAR 73a do not conflict with or hinder the Technical Education School's current or future curriculum activities.

**GG. 4.9.4.1 Construction Across and Within Roadways and Railways @ 4-141**

Consult with NYSDOT and FHWA regarding impacts on the upgrade to NY Rt 17. Develop mitigation measures and file the results of the consultation and the measures prior to the end of the EIS comment period.

**HH. 4.9.6 Insurance @ 4-143**

Should file reports describing any pipeline-related complaints concerning landowner's homeowner insurance policy and identify how Constitution will coordinate with the affected party to mitigate impacts associated with the complaints.

**II. 4.10.1.3 Archeological Sites @ 4-153**

The Company has not completed surveys for historic aboveground resources for 10 parcels for which access has not been granted.

**JJ. 4.10.4 General Impacts and Mitigation @ 4-156**

The Company should not begin implementation of any treatment plans; construction of facilities; or use of staging, storage, or temporary work areas and new or to-be improved access roads UNTIL:

1. Constitution files with the Secretary outstanding cultural resource surveys and evaluation reports with any necessary treatment plans and PHMC and OPRHP's comments as appropriate.
2. Constitution provides documentation that it has provided cultural resource reports to the Native American Tribes that requested them
3. The ACHP is provided an opportunity to comment on the undertaking if historic properties will be adversely impacted
4. FERC reviews and the Director of OEP approves all cultural resource survey reports and notifies the Company in writing that mitigation plans may be implemented or construction may proceed.

**KK. 4.11.1.2 Prevention of Significant Deterioration – Air Quality @ 4-166**

Prior to construction, CP must submit a Construction Emission Plan identifying how they will track construction schedules and ensure NOx emissions remain in the General Conformity applicability threshold.

**LL. 4.11.2.3 Noise Level Impacts and Mitigation @ 4-183**

Should file for the review and approval from the Director of the OEP a plan detailing the additional noise mitigation measures that will be used to ensure that the noise levels at HDD#4 do not exceed 55dBA or increase over ambient conditions greater than 10 dB at NSA #1.

**MM. 4.11.2.3 Noise Level Impacts and Mitigation @ 4-187**

File a noise survey with the Secretary about the units at the Wright Compressor Station while operating at full horsepower load.

Missing Documents

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Exhibit 2

Deficiencies in  
Constitution Pipeline  
Company’s Responses  
to Agency Requests

Docket Nos. PF12-9, CP13-499

CO42-59      The need for and types of information that is needed evolves over the course of a project as prior issues may remain or become resolved or obsolete and new issues may emerge. Other federal or state agencies may also request specific information that is needed for their permitting reviews, but that may not be necessarily needed for the NEPA review. See the response to comment CO42-18. We are in receipt of current comments from the NYSDEC, the COE, and other agencies regarding the draft EIS. These current comments are addressed above. See the response to comment CO42-20 regarding the COE’s involvement in the project and in development of the EIS.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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cont'd

### PACE ENVIRONMENTAL LITIGATION CLINIC, INC.

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December 16, 2013

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street NE, Room 1A  
Washington, DC 20426

**Re: Deficiencies in Constitution Pipeline Company's Responses to  
Agency Requests, Docket Nos. PF12-9, CP13-499**

Dear Secretary Bose:

The Pace Environmental Litigation Clinic ("PELC") represents Stop the Pipeline ("STP"), an association of citizens affected by the proposed Constitution pipeline. STP's goals are to preserve and enhance the rural heritage and pristine environment of central New York State, and north central Pennsylvania, by ensuring the purity of its air, water, and soil, the health of its inhabitants, the resilience of its ecosystems, and the capacity of the area to be self-sustaining. STP is associated with over 1000 citizens who would be affected by the proposed pipeline. STP members, together with other members of the public, submitted over 1000 comments to FERC's docket between May 2012 and July 2013. Hundreds of STP's members also intervened during July 2013. Since then thousands of pages have been filed, and we write now to comment on the Constitution Pipeline Company's responses to FERC's recent requests for information.

**I. INTRODUCTION**

The Constitution Pipeline Company, LLC (the "Company" or the "Applicant") is proposing to construct and operate a 30-inch diameter, 124-mile long natural gas transmission line that would run from Susquehanna County, Pennsylvania, through Broome, Chenango, Delaware and Schoharie Counties, New York. The Company submitted two draft resource reports on May 21, 2012, and a complete set on February 22, 2013, in docket number PF12-9. It filed its application for a certificate of public convenience and necessity on June 13, 2013, along with a new set of draft resource reports, in docket number CP13-499.

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The Federal Energy Regulatory Commission (“FERC”) is designated as lead agency for the environmental review of new interstate gas transmission lines, but relies on the applicant to obtain enough information to develop an Environmental Impact Statement (“EIS”) for the project, and to take a “hard look” at its environmental impacts. FERC has requested additional information from the Company on three separate occasions, which it needs in order to complete its draft EIS. Once FERC finalizes the EIS, other agencies may rely on the document to decide whether to grant and/or how to condition other permits required for the project. Some of these agencies have also commented and requested information from the Company in order to obtain adequate information to make determinations with respect to their respective permits.

In this comment, PELC will analyze the Company’s response to Request No. 1 of FERC’s 40-page request for more information (“EIR”).<sup>1</sup> In Request No. 1, FERC asked the Company to respond to *all* of the agencies’ comments. PELC is limiting its analysis to the comments made by only two agencies: the United States Army Corps of Engineers (“USACE”) and the New York State Department of Environmental Conservation (“NYSDEC”). PELC found a wide range of problems with the Company’s responses—or lack thereof—to the comments submitted by USACE and NYSDEC. These problems include, but are not limited to: 1) a complete failure to even acknowledge many agency comments; and 2) inadequate responses to many of the other agency requests. While the scope of this comment is limited to problems with the Company’s responses to USACE and NYSDEC, it is almost certain that similar issues permeate the Company’s so-called “responses” to other agencies’ comments, and to FERC’s own requests for information found in the remaining 40 pages of the August 29, 2013 EIR.

In conducting this analysis, PELC scrutinized the Company’s Agency Data Request Response Tracking Table, which is contained in Appendix A of the Company’s November 11, 2013 submission (the “Current Tracking Table”).<sup>2</sup> The Company had submitted an earlier Agency Data Request Response Tracking Table as part of its July 24, 2013 submission (the “Superseded Tracking Table”).<sup>3</sup> For all intents and purposes, the Company has represented that the Current Tracking Table, submitted on November 11, 2013, supersedes all of the tracking tables filed prior to that date as the Current Tracking Table includes a column indicating the specific dates the responses were made to FERC. In other words, the Current Tracking Table is the final version available to the public.

<sup>1</sup> Kevin Bowman, Environmental Information Request for the Constitution Pipeline and Wright Interconnect Projects (Aug. 29, 2013), *available at* <http://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13340013> [hereinafter FERC Request No. 1].

<sup>2</sup> Constitution Pipeline Co., LLC, Supplement to June 13, 2013 and July 24, 2013 Submittals, App. A (Nov. 11, 2012), *available at* <http://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13391254> [hereinafter Current Tracking Table].

<sup>3</sup> Constitution Pipeline Co., LLC, Supplement Environmental Information, App. A (July 24, 2013), *available at* <http://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13313479> [hereinafter Superseded Tracking Table].

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Shockingly, the Current Tracking Table completely omits most agency comments. In some instances the Company had responded to agency comments in the Superseded Tracking Tables, but has now deleted them without any explanation whatsoever. Thus, the Company has surreptitiously concealed a substantial number of agency comments and Company responses in an apparent attempt to avoid public scrutiny. Therefore, PELC has performed a comprehensive review of all comments (of USACE and NYSDEC) and responses (of the Company) contained in both the Superseded and Current Tracking Tables.

Finally, PELC requests that FERC expand Request No. 1 to include responses to comments submitted by members of the public. FERC has asked the Company to respond to comments made by other agencies, but has ignored the substantial and substantive comments made by the public. FERC should demand that the Company respond to the concerns of individual citizens and citizen groups raised during the pre-filing and scoping process.

### II. THE COMPANY HAS FAILED TO ADEQUATELY RESPOND TO FERC'S REQUESTS.

FERC's Request No. 1 states as follows:

As previously requested in the Federal Energy Regulatory Commission's (FERC or Commission) Environmental Information Request (EIR) dated April 9, 2013 (April EIR) (Overall No. 1), Constitution should address all of the comments filed in the public record by other agencies regarding the draft Resource Reports (RR), such as the May 3 and 28, 2013 comments from the New York State Department of Agriculture and Markets and the New York State Department of Environmental Conservation (NYSDEC), respectively.<sup>4</sup>

On September 18, 2013, the Company responded by stating,

Constitution has obtained the requested information distributed by the New York State Department of Agriculture and Markets and the New York State Department of Environmental Conservation (NYSDEC) as well and is working with these agencies to ensure their concerns are discussed and incorporated if viable. Constitution outlined these requests and provided discussion in Appendix A, Agency Data Request Response Tracking Table, of the ER submitted in June 2013 and the supplemental filing in July 2013.<sup>5</sup>

By requesting that the Company "address *all* of the comments filed in the public record by other agencies," FERC did not limit the scope of the Company's responses to ones that the

<sup>4</sup> FERC Request No. 1.

<sup>5</sup> Timothy Powell, *Response to Environmental Information Request for the Constitution Pipeline* (Sept. 18, 2013), available at <http://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13351439>.

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Company deems “viable.” Nor did FERC limit the scope to only requests from the New York State Department of Agriculture and Markets and the NYSDEC. The Company must provide complete responses to *all* requests from *all* agencies.

### III. THE COMPANY’S TRACKING TABLE LACKS TRANSPARENCY

FERC requires applicants to create a table to track what information has been requested by agencies, and how those comments have been answered. The point of the tracking table is to have a comprehensive document that makes it easy to follow the back and forth between the agencies and the applicant. This table is intended to provide more transparency to the public by organizing and summarizing the exchange of vast amounts of information between the agencies and the applicant in one location in an easy to follow format.

However, rather than following this protocol, the Company has made every effort to obscure exchanges between the agencies and the applicant. For example, until the November 12, 2013 documents were filed, the Company’s Superseded Tracking Table was in 6-point font, which made it almost impossible for the public to read. Another problem is that many of the comments and responses use a pale gray font, which is nearly illegible when printed.

In addition to poor presentation, the Company’s list of agency’s comments does not include citations or links to the original documents, or direct quotations from them, so it is impossible to track what the agency actually stated or requested. If the public cannot track what the agency asked, then citizens cannot determine whether the Company adequately responded to those statements or requests. In addition, the Company’s responses frequently refer to scores of pages in other documents, rather than giving specific answers within the tracking table.<sup>6</sup> This approach makes it impossible to determine whether the Company has actually responded to the agencies’ comments, and requires the public to dig through mountains of data. By failing to include proper reference to agency requests and forcing the public to sort through mounds of information, the Applicant has left the public to follow an endless “breadcrumb trail” to determine to which agency comment the Company is responding, and whether the Company has actually responded to that comment.

The scope of the problem becomes more apparent when one considers the volume of material that has been filed by the Company. The June 13, 2013 application and draft Resource Reports comprise over 3,700 discrete pages (over 1 GB of data). Almost all of the documents have been resubmitted twice since then, and each submission is substantially larger than the last. For example, the November 11, 2013 set of draft Resource Reports includes over 160 files, containing over 1.4 GB of data. This represents a 40% increase in data since June. Because of the volume and complexity of the filed documents, it is imperative that the tracking tables provide an easy method for following the back and forth between the agencies and the Applicant.

<sup>6</sup> For instance, both NYSDEC-7 and NYSDEC-8 in Appendix A from July 25, 2013 fail to provide information within the tracking table. *See* Appendix A, Agency Data Request Response Tracking Table (July 25, 2013).



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An Environmental Impact Statement, and all supporting documents, must be accessible to public.<sup>7</sup> Moreover, “[t]he regulations promulgated by the Council on Environmental Quality are mandatory, not hortatory. They require that an agency give environmental information to the public and then provide an opportunity for informed comments to the agency.”<sup>8</sup> This process of disclosing information to the public must occur before the agency has reached its final decision on whether to go forward with the project.<sup>9</sup> Thus, to comply, the Company (as the applicant) and FERC (as the lead agency), must make the volume of material easy to read and track. All requests for more information, and responses to them, must include legible fonts, citations, hyperlinks, searchable text, etc. Otherwise, the EIS is just an avalanche of paper meant to stifle all meaningful discussion and analysis.

#### IV. THE COMPANY HAS FAILED TO ACKNOWLEDGE AND RESPOND TO MOST OF THE AGENCY COMMENTS.

FERC Request No. 1 states that the Company must provide responses to *all* comments from *all* agencies. To date, the Company has failed to include many requests for information made by the USACE and NYSDREC in the agency response tracking tables.<sup>10</sup> The USACE and NYSDREC have both submitted scoping comments, and several other comment letters.<sup>11</sup> These included requests for very specific information as well as broad demands. For example, both

<sup>7</sup> See 40 C.F.R. § 1506.6 (2013) (providing that federal agencies must make diligent efforts to involve the public in preparing environmental documents, give public notice of the availability of environmental documents so as to inform those persons who may be interested or affected, and solicit appropriate information from the public).

<sup>8</sup> 40 C.F.R. §§ 1501.4, 1506.6 (2013).

<sup>9</sup> *Sierra Nevada Forest Protection Campaign v. Weingardt*, 376 F. Supp. 2d 984 (E.D. Cal 2005) (citing 40 C.F.R. § 1500.1(b)).

<sup>10</sup> Superseded Tracking Table; Current Tracking Table.

<sup>11</sup> USACE, scoping comments, (Oct. 9, 2012), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14057852](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14057852); USACE, comments on draft resource reports, (March 29, 2013), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14102324](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14102324); USACE, EIR, (July 24, 2013), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14132569](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14132569); NYSDREC, scoping comments, (Nov. 7, 2012), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20121106-5145](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20121106-5145); NYSDREC, preliminary comments on draft resource reports, (Mar. 29, 2013), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14102528](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14102528); NYSDREC, preliminary comments on environmental construction plan (May 28, 2013), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20130528-5079](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20130528-5079); NYSDREC, preliminary comments on application, (July 17, 2013), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14131052](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14131052); NYSDREC, comments on environmental report, alternatives analysis (Sept. 25, 2013), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14148677](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14148677).

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agencies have stated that they will require a complete cumulative impact analysis and detailed studies on alternative routes before they can issue their respective permits. As discussed below, these studies have not yet been submitted. Company responses were mandated by FERC in its August 29, 2013 EIR as a prerequisite to the filing of a draft EIS.<sup>12</sup>

### 1. Engineering Drawings Depicting Temporary and Permanent Impacts

On March 29, 2013, USACE requested specific engineering drawings depicting temporary and permanent impacts:

In addition to the information contained in the draft DRP's, the USACE will require site specific 8.5 x 11" black and white engineer-type drawings that depict temporary and permanent impacts associated with the project. These impacts include but are not limited to contractor staging areas and pipe yards, alternative work spaces, access roads, and cathodic protection ground beds.<sup>13</sup>

To date, the Company has offered no response in the agency tracking tables it has submitted.<sup>14</sup>

### 2. Delineation of Access Roads

The Company has similarly failed to acknowledge USACE's request for delineation of access roads:

All proposed access road corridors associated with the project, or any existing roads proposed to be modified, inside or outside of the project ROW, should be delineated to accurately quantify temporary and permanent impacts to WOUS. Drawings should distinguish access roads as existing or proposed.

Again, the Company's agency response tracking tables do not contain a response.<sup>15</sup>

### 3. Evaluation of Wetlands Impacts

Similarly, the Company failed to acknowledge NYSDEC's request for it to evaluate wetlands impacts:

Wetland impacts that would result from construction of the proposed and alternate routes, including avoidance and minimization measures that would be employed, must be evaluated. If proposed construction in wetlands could result in a

<sup>12</sup> FERC Request No. 1.

<sup>13</sup> USACE, Comments Regarding Draft Resource Reports, (Mar. 29, 2013), available at [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14102324](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14102324).

<sup>14</sup> Superseded Tracking Table; Current Tracking Table.

<sup>15</sup> *Id.*

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significant change in the type of wetland community (such as conversion of forested to non-forested wetland) or in a significant loss to the functions and benefits of the wetland, mitigation in the form of created wetlands or other acceptable measures would be required and should also be evaluated.<sup>16</sup>

The Company has not addressed wetlands impacts for the proposed route or any alternate routes within any of its tracking tables.<sup>17</sup>

#### 4. Stream Classification and Proposed Methods for Crossing

The company has also ignored NYSDEC's request to discuss stream classifications and proposed methods for crossing each segment:

The classification of all stream segments proposed to be crossed, including alternative segments, and the proposed method for crossing for each segment must be discussed and evaluated by the Applicant. All waters of the State are provided a class and standard designation based on existing or expected best usage; these classifications include AA, A, B, C(t) and (Ct) which are classified as "protected." NYSDEC is currently reviewing stream classifications in NYSDEC Regions 4 and 7 and an initial review of the preferred Project route shows that seventy-three (73) known 'protected' class streams would be crossed by the proposed pipeline; at least an additional seven (7) which contain trout are also subject to protected class jurisdiction.<sup>18</sup>

The Company has not included this NYSDEC request within its tracking tables.<sup>19</sup>

#### 5. Preliminary Stormwater Pollution Prevention Plan

The Company has not complied with NYSDEC's request for a preliminary Stormwater Pollution Prevention Plan. NYSDEC stated:

A preliminary Stormwater Pollution Prevention Plan (SWPPP) must be included as an appendix to the draft EIS, describing the proposed erosion and sediment control practices and, where required, post-construction stormwater management practices, that will be used and constructed to reduce the pollutants in stormwater discharges. Of particular concern in certain areas along the proposed Project route is the existence of karst topography, which warrants additional considerations in preparation of the SWPPP to ensure that by-products of the construction process

<sup>16</sup> NYSDEC Preliminary Comments on Application (July 17, 2013), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14131052](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14131052).

<sup>17</sup> Superseded Tracking Table; Current Tracking Table.

<sup>18</sup> NYSDEC Preliminary Comments on Application (July 17, 2013), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14131052](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14131052).

<sup>19</sup> Superseded Tracking Table; Current Tracking Table.

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do not enter karst inlets, including exposed soil, fuel, oil, hydrologic fluids and other construction-related chemicals. Work in and around streams, wetlands and karst inlets (including discharge of water withdrawn from surface water or groundwater for hydrostatic testing) must employ Best Management Practices (BMPs) to ensure that water quality standards are maintained. Strict attention to proper installation and maintenance of sediment and erosion controls in these areas is critical. Methods for maintaining water quality should include isolating work areas (e.g. piping, coffer dam, pumping around) from the flowing waters to ensure that work is accomplished in the dry such that no visible contrast to waters outside and downstream of the work site is apparent.

The Applicant should evaluate how the various erosion control techniques described in the SWPPP will be coordinated within the construction schedule to avoid the potential for catastrophic erosion events witnessed by NYSDEC staff in previous pipeline installations. For example, extensive time delays between vegetation clearing/grubbing, initial grading of the right-of-way (ROW) and actual installation of the pipe must be avoided and temporary mulching or the use of wood chips for ROWs should be evaluated. It is recommended that only a limited length of the Project development area be opened up at any one time. Where forest cover will be removed, it is also recommended that stump removal and grubbing not be conducted until installation crews are ready to work in that area.<sup>20</sup>

The SWPPP was not included as an appendix to the Company's draft resource reports and has not been included in the Current Tracking Table. By failing to provide clear and adequate notice of its intended SWPPP, the Company is stifling public discourse and agency review of the proposed pipeline's environmental implications.

### 6. Cumulative Environmental Impacts

Finally, the Applicant has failed to evaluate the cumulative environmental impacts associated with the construction and operation of the Constitution Pipeline, as requested by NYSDEC:

[T]he Applicant must evaluate whether the Project would be reasonably available for supply and distribution for communities along the Project route and whether the Project could reasonably serve as a collector line for additional supply from New York Marcellus and Utica Shale formations. Since the location of the proposed Project route has a high potential for development of natural gas extraction from Marcellus and Utica Shale formations, as indicated in the revised NYSDEC draft Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program, September 7, 2011, the draft

<sup>20</sup> NYSDEC Preliminary Comments on Application (July 17, 2013), available at [http://elibrary.ferc.gov/dmws/file\\_list.asp?document\\_id=14131052](http://elibrary.ferc.gov/dmws/file_list.asp?document_id=14131052).

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EIS must evaluate the cumulative environmental impacts associated with these potential activities.<sup>21</sup>

By failing to address the cumulative impacts associated with constructing and operating the Constitution Pipeline,<sup>22</sup> the Company is attempting to conceal one of its gravest environmental consequences. As a principal public concern with foreseeable and significant environmental consequences, the cumulative impacts associated with constructing and operating this pipeline must be fully evaluated. The Company should include this evaluation in its resource reports and note it in its Current Tracking Table so that the public and agencies have adequate time to review and respond to the information.

### V. THE COMPANY HAS NO LEGAL AUTHORITY TO DISREGARD AGENCY REQUESTS.

Because agencies can rely on FERC's EIS in order to decide whether to grant and/or how to condition their own permits, the Company must supply the agencies with the information they have requested. In many of the instances where the Company does respond to agency requests, it avoids providing a substantive response by raising meritless claims.<sup>23</sup> In many instances the Company says that this information has been, or will be, provided in a different legal forum, such a permit application, or it will be sent directly to the agency. This is not acceptable. Both agencies have explicitly stated that all information must be included in the EIS. The Company's evasive answers completely undermine the agencies' ability to carry out a comprehensive environmental review for permitting purposes under FERC's EIS.

#### 1. Non-Surveyed Areas

For example, in a comment dated March 29, 2013, USACE stated that,

[t]he DRP indicates that a desktop analysis was used to identify wetlands and waterbodies on non-surveyed parcels. Prior to making a permit decision, the USACE will need field delineations of all parcels proposed to be impacted by the project. The USACE respectfully requests that FERC also defer a decision on the project until all parcels are delineated.<sup>24</sup>

<sup>21</sup> NYSDEC Preliminary Comments on Application (July 17, 2013), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14131052](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14131052).

<sup>22</sup> Superseded Tracking Table; Current Tracking Table.

<sup>23</sup> New York State Department of Environmental Conservation, Comments on the Scope of Environmental Impact Statement for the Constitution Pipeline Project (Nov. 7, 2012) *available at* <http://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13104317>.

<sup>24</sup> USACE, Comments Regarding Draft Resource Reports, Mar. 29, 2013, *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14102324](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14102324).

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The Company offered the following response in the Superseded Tracking Table, but completely deleted it in the Current Tracking Table:

For linear utility projects in New York the Nationwide Permit rules and guidelines and in Pennsylvania the State Programmatic General Permit-4 rules and guidelines, state that by definition each wetland and waterbody crossing is a single and complete project. Constitution's preliminary analysis indicates that all wetland and waterbody impacts is such that these permit authorization mechanisms are applicable. Once the FERC issues a Certificate of Public Need and Necessity all parcels will be surveyed and verified by the USACE and the appropriate permits will be applied for and impact mitigation.<sup>25</sup>

The Company's response completely sidesteps USACE's request, and instead offers a legal argument against its validity. It is not the Company's role to determine whether an agency comment requires a valid response. USACE has explicitly requested that the Company carry out field delineations on all parcels proposed to be impacted by the Project so that it may analyze the information as part of its comprehensive environmental review process. The Company has admitted that it has not conducted field surveys on 173 of "the 707 total [parcels] crossed by construction and operation of the Project."<sup>26</sup> The Company is required to respond to the agency's comment; not assert legal arguments against its validity.

### 2. Cumulative Impact Analysis

Another example of the Company's failure to provide adequate substantive information is its response to USACE's comment regarding cumulative impact analysis:

[i]n addition to being a requirement of the National Environmental Policy [Act] (NEPA), a cumulative impact analysis is required pursuant to the Environmental Protection Agency's (EPA) 404(b)(1) Guidelines under Section 404 of the Clean Water Act (40 CFR Part 230). In addition, cumulative impacts are considered under USACE Public Interest Review. This determination involves evaluation of twenty public interest factors listed in 33 CFR 320.4(a)(2). We request the cumulative Impact Analysis include both the 404(b)(1) Guidelines and the Public Interest Review Factors.<sup>27</sup>

The Company offered the following response in the Superseded Tracking Table, but completely deleted the request and response in the Current Tracking Table:

<sup>25</sup> Superseded Tracking Table, at 3.

<sup>26</sup> Supplement to June 13, 2013 and July 24, 2013 Environmental Reports, Resource Report No. 1, General Project Description (Nov. 12, 2013), at 1-16.

<sup>27</sup> USACE, Comments Regarding Draft Resource Reports, Mar. 29, 2013, *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14102324](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14102324).

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The FERC Environmental Reports (ERs), required as part of the filing process, are setup to provide the necessary environmental documentation mandated in the Commission's Regulation, which implement the National Environmental Policy Act of 1969. Those regulations supplement the regulations of the Council on Environmental Quality (CEQ), 40 Code of Federal Regulations (CFR) Parts 1500 through 1508. The 13 ERs and their supporting information have been organized to meet the current Commission and NEPA requirements. The 20 public interest factors considered under USACE Public Interest Review (conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property and ownership, in general, the needs and welfare of the people) are all topics that are covered under the FERC ERs (Project Description, Water Use and Quality of Fish, Wildlife, and Vegetation, Cultural, Socioeconomics, Geological Resources, Soils, Land Use, Recreation and Aesthetics, Air and Noise Quality, Alternatives, Reliability and Safety, PCB Contamination, Engineering and Design Material), where relevant and applicable to the proposed Project.<sup>28</sup>

FERC may be the lead agency in this NEPA review, as authorized by the Natural Gas Act, but it has no authority to issue a § 404 permit under the Clean Water Act. In order to build the proposed pipeline, the Company must obtain a § 404 permit from USACE, and therefore must comply with its requests for information. USACE's Public Interest Review is applicable to all § 404 permit applications, and involves, *inter alia*, a rigorous analysis of twenty specific factors, including:

conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.<sup>29</sup>

In addition, the regulations governing USACE Public Interest Review require an applicant to comply with the Environmental Protection Agency's 404(b)(1) guidelines, where a discharge permit is required.<sup>30</sup>

Notwithstanding the Company's complete failure to even address EPA's § 404(b)(1) guidelines, the Company made no effort to comply with USACE's request. The Company asserts that it is not required to complete USACE's Public Interest Review because some of the

<sup>28</sup> Superseded Tracking Table, at 3.

<sup>29</sup> 33 C.F.R. § 320.4(a)(1) (2013).

<sup>30</sup> *Id.*

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factors overlap with topics covered under the FERC Environmental Reports. This assertion is simply erroneous. USACE specifically requested this information to be included in the EIS so that the full range of potential impacts can be considered as part of the § 404 permit decision-making process. Moreover, the thirteen subject areas covered in FERC's Environmental Reports do not correspond with the twenty factors contained under USACE's Public Interest Review. Thus, the Company's response is merely a hollow attempt to avoid performing a proper Public Interest Review as required by USACE.

### 3. Mitigation of Impacts

The Company pulled a similar maneuver in its response to USACE's comments regarding a mitigation plan:

We request that a mitigation plan that follows the requirements of Title 33 of the C.F.R. Part 332 be incorporated into the environmental documentation to mitigate for proposed impacts of waters of the United States.<sup>31</sup>

The Company offered the following response in the Superseded Tracking Table, but has deleted it from the Current Tracking Table:

Constitution is developing a mitigation plan for impacts to wetlands and waterbodies that follows the regulation of 33 CFR Part 332. Constitution will work with the applicable state agencies and USACE district offices prior to finalization of the mitigation plan to ensure suitability and acceptance of the proposed mitigation plan and adequately compensate for impacts to wetland and water resources associated with the Project.<sup>32</sup>

From the very beginning, USACE has requested that all information, including the mitigation plan, must be consolidated into a single, comprehensive environmental review prior to the issuance of a final EIS.<sup>33</sup> USACE needs this information to be included in the EIS in order to determine whether or not to issue a § 404 permit. Thus, the Company's reassurance that it is developing a mitigation plan, while offering no indication of when it may be completed, is not responsive to USACE's requests. Moreover, the development of a mitigation plan is necessarily dependent on the delineation of all affected parcels. In other words, the first step of developing a mitigation plan requires the Company to complete field delineations for all affected parcels in order to identify all of the waters of the United States that will be affected by the project. The Company has admitted it has not completed field delineations for all affected parcels. Thus, the Company's response to USACE's request for a mitigation plan is insufficient at best, and misleading at worst.

<sup>31</sup> USACE, Comments Regarding Draft Resource Reports, Mar. 29, 2013, available at [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14102324](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14102324).

<sup>32</sup> Superseded Tracking Table, at 8.

<sup>33</sup> USACE, Comments on Scope of Work (October 9, 2012), available at [http://elibrary.FERC.gov/idmws/file\\_list.asp?accession\\_num=20121009-5285](http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20121009-5285).

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### 4. Alternative Route Analysis

Finally, in a letter dated July 24, 2013, USACE specifically requested, “[a]dditional details and documentation to support the reasons why the pipeline could be constructed within the New York State Dep’t of Transportation’s “control access” area. It doesn’t appear that this option was fully explored and the applicant provided no documentation or correspondence from NYSDOT to support any determination or conclusions they may have made.”<sup>34</sup> The Company offered the following response in the Current Tracking Table:

A response to the NYSDEC’s and the USACE’s concerns about fully assessing the I-88 corridor was included in a letter dated October 22, 2013 to the NYSDEC. The USACE, NYSDOT and FERC were provided a copy of this letter.<sup>35</sup>

The Company offered no indication of where the letter dated October 22, 2013 could be found.<sup>36</sup>

As outlined above, “[t]he regulations promulgated by the Council on Environmental Quality are mandatory, not hortatory. They require that an agency give environmental information to the public and then provide an opportunity for informed comments to the agency.”<sup>37</sup> This process of disclosing information to the public must occur before the agency has reached its final decision on whether to go forward with the project.”<sup>38</sup> Simply providing the October 22, 2013 letter in an appendix containing an avalanche of agency correspondence does not meet this standard. Moreover, requiring the agency (and the public) to dig through mountains of documents to find a response to USACE’s request is impermissible. Any substantive response contained in the October 22, 2013 letter must be included in the body of the EIS. Burying the response in 630 pages of agency correspondence undermines the agencies’ ability to carry out a comprehensive environmental review.

<sup>34</sup> USACE, Comments Regarding Draft Resource Reports (July 24, 2013), available at [http://clibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14132569](http://clibrary.ferc.gov/idmws/file_list.asp?document_id=14132569).

<sup>35</sup> Current Tracking Table, at 76.

<sup>36</sup> The Company included the letter in Appendix D of its November 12, 2013 re-submission. However, the letter was buried in over 630 pages of agency correspondence, some of which was non-searchable.

<sup>37</sup> 40 C.F.R. §§ 1501.4, 1506.6 (2013).

<sup>38</sup> *Sierra Nevada Forest Protection Campaign v. Weingardt*, 376 F. Supp. 2d 984 (E.D. Cal 2005) (citing 40 C.F.R. § 1500.1(b)).

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### VI. THE COMPANY PROVIDES INADEQUATE RESPONSES TO MANY AGENCY REQUESTS.

Many of the Company’s responses are partial, selectively choosing to answer only portions of the agencies’ requests. This is another deceptive technique that serves only to mislead the public and frustrate the agencies as they struggle to obtain the information they need to conduct a proper and meaningful assessment.

#### 1. Purpose and Need

For example, in a comment dated March 29, 2013, USACE stated that,

[t]he DRP gives a brief purpose of need and description and references the Public Convenience and Necessity section of the Certificate application. We recommend the environmental documentation include a complete discussion of purpose and need.<sup>39</sup>

The Company responded by offering a reference to the following information in the Superseded Tracking Table, but deleted it in the Current Tracking Table:

Detailed agreements, including the installation of pipeline taps and metering facilities, between Constitution pipeline and any local distribution companies for gas service to towns and municipalities may be negotiated at a later date. Where feasible, this new gas supply would allow local distribution companies the opportunity to develop gas service to these municipalities, which, at current pricing, could provide residential, commercial, and industrial consumers with substantial energy cost savings. While local deliveries likely would account for a small percentage of the overall transported volumes, those deliveries could provide immediate and long term economic benefits to these communities. The project is consistent with the Commission’s Statement of Policy on the Certification of New Interstate Natural Gas Pipeline Facilities, as more fully discussed in the Public Convenience and Necessity section of the Certificate application.<sup>40</sup>

The Company’s response falls vastly short of a complete discussion of purpose and need. Indeed, it appears the Company has not even attempted to comply with this request. USACE regulations require that “if the scope of analysis covers a more extensive project, only part of which may require a DA permit, then the underlying purpose and need for the entire project should be stated.”<sup>41</sup> Moreover, while the applicant is normally “encouraged to provide a statement of his proposed activity’s purpose and need from [its] perspective . . . whenever the

<sup>39</sup> USACE, Comments Regarding Draft Resource Reports, Mar. 29, 2013, *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14102324](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14102324).

<sup>40</sup> Superseded Tracking Table, at 3.

<sup>41</sup> 33 C.F.R. § 325, App. B (2013).

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NEPA document's scope of analysis renders it appropriate, the Corps also should consider and express that activity's underlying purpose and need from a *public interest perspective* . . . .<sup>42</sup>

The Company's response merely indicates why the project would benefit *the Company*, rather than evaluating the need "from a public interest perspective." The response addresses the needs of the public only in an abstract and hypothetical sense. Rather than providing a concrete analysis of the public's actual need for the project, the Company mentions hypothetical gas supply contracts with municipalities that "may be negotiated at a later date." In addition, the Company mentions a projected increase in demand in the northeast market, but provides no substantiation of actual demand for this gas. This speculative response falls far short of a complete discussion of purpose and need, which is what is required by the USACE in order to grant a § 404 permit.

### 2. Aboveground and Pipeline Appurtenant Facilities

Not only has the Company failed to adequately respond to agency requests, but some of its statements are conclusions, rather than responses. The Company's role is not to act as if it is the lead agency that can make a final determination; rather it should focus on addressing the legitimate concerns posed by the various agencies involved in the project. For example, on March 29, 2013, USACE commented:

Paragraph one states that the Turnpike Road M&R station site will be surveyed for surface waters in 2013. The last two sentences state "None of these aboveground facilities will require disturbance of surface water bodies during construction or operation. Therefore, no adverse impacts are anticipated." We recommend this section be clarified since it is unlikely a determination of no adverse impacts can be confirmed until all surface waters are identified.<sup>43</sup>

The Company responded with the following in the Superseded Tracking Table, but entirely omitted the request and response in the Current Tracking Table:

All aboveground facility locations have been identified and surveyed for wetlands and waterbodies. Aboveground facilities will not permanently impact wetland and water bodies but may require temporary disturbances for temporary workspace during construction. If wetland and water bodies are impacted, impacts will be temporary and restored or if needed mitigated. Therefore, Constitution does not anticipate adverse impacts to wetland and water bodies.<sup>44</sup>

The Company's defiant response fails to address the basic concerns outlined by USACE, which clearly stated that all surface waters must be identified before it can

<sup>42</sup> *Id.* (emphasis added).

<sup>43</sup> USACE, Comments Regarding Draft Resource Reports, Mar. 29, 2013, *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14102324](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14102324).

<sup>44</sup> Superseded Tracking Table, at 3.

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determine whether adverse impacts will result. USACE did not ask the Company whether "all the aboveground facility locations have been identified and surveyed for wetlands," or whether those impacts would be temporary. The Applicant must give responsive answers to the questions and comments made by the agencies. Moreover, the Company isn't entitled to offer its opinion that its activities will not result in adverse impacts. Merely offering reassurance that "if wetland and water bodies are impacted, impacts will be temporary and restored," is not a valid answer to USACE's request.

### 3. Permanent Right of Way

Another instance of the Company's conclusory attitude is its answer to USACE's request for clarification regarding a permanent right of way. On March 29, 2013, USACE commented that, "[a] number of pages state that the permanent ROW width in wetlands will be 50 ft, while other pages that it will be 30 ft. wide. The USACE believes that width should be 30 ft. wide. Please ensure that these numbers are consistent."<sup>45</sup>

In the Superseded Tracking Table submitted on July 24, 2013, the Company responded with the following:

Constitution will acquire a 50-permanent pipeline easement for the life of the pipeline. However, only 30-feet of the 50-feet will be maintained. Of the 30 feet, a 10-foot wide corridor will be permanently maintained in herbaceous vegetated cover through formerly PFO and PSS wetlands, and 30-foot wide corridor will be permanently maintained through PFO wetlands where trees taller than 15 feet will be selectively cut and removed; there is no operation impact on PEM wetlands, since there is no change in the pre-and post-construction vegetation cover type.<sup>46</sup>

USACE submitted a subsequent comment regarding the permanent right of way on July 24, 2013:

Resource Report 1, 1-58, states "Within wetlands, Constitution will maintain only the 10 foot corridor centered over the pipeline, allowing the balance of Constitution's permanent easement to revert to its natural, preconstruction vegetated cover state. Additionally, within wetlands, Constitution reserves the right to selectively cut and remove trees larger than 15 feet in height that are located within 15 feet of the pipeline." Resource Report 2, 2-93, states "Within wetlands, the typical construction workspace will be reduced to 75 feet, and the permanent maintained ROW will be 50 feet and will be maintained in accordance with the FERC Plan and Procedures (FERC 203a, b)". Further references to corridor maintenance are found on pages 2-107 and in Resource Report 3, 3-51. Section D, 1 of FERC's Plan and Procedures Wetland and Waterbody

<sup>45</sup> USACE, Comments Regarding Draft Resource Reports, Mar. 29, 2013, *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14102324](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14102324).

<sup>46</sup> Superseded Tracking Table, at 3.

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Construction and Mitigation Procedures" states "Do not conduct routine vegetation mowing or clearing over the full width of the permanent right of way in wetlands. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10 foot corridor in an herbaceous state. In addition, trees within 15 feet of the pipeline coating may be selectively cut and removed from the permanent right of way."

FERC's procedures appear to allow only a 30 foot permanent, maintained ROW, with the 10 foot and 15 foot corridors measured from the center of the pipeline and extending on either side. We request the applicant submit clarification and include a drawing that is incorporated into the final document (along with clearly describing the maintained corridor wherever it is references) to [ ]<sup>47</sup>

The Company offered a subsequent response in the Current Tracking Table submitted on November 12, 2013:

In wetlands, vegetation maintenance over the full width of the permanent ROW is prohibited pursuant to the FERC's Wetland and Waterbody Construction and Mitigation Procedures (FERC Procedures). However, to facilitate periodic pipeline corrosion/leak surveys, a corridor centered on the pipeline up to 10 feet wide will be maintained annually in an herbaceous state. In addition, trees that are located within 15 feet on either side of the pipeline with roots that could compromise the integrity of pipeline coating may be selectively cut and removed from the permanent ROW. Trees and shrubs that become reestablished beyond 15 feet on either side of the pipeline will not be disturbed.<sup>48</sup>

Despite USACE's understanding that the permanent right of way must be no larger than 30 feet in width, the Company boldly asserts that it will take a 50-foot right of way anyway. It offers no justification in support of this position, and fails to cite to FERC's regulations allowing it to take a 50-foot permanent right of way. This arrogant response is counterproductive, and leaves USACE's request completely unanswered.

#### 4. Natural Stream Design Techniques

NYSDEC requested that the Company discuss the use of Natural Stream Design techniques:

The Applicant should evaluate instances where the bed or bank of a stream would be disturbed and discuss the use of "Natural Stream Design" techniques and structures for restoration of the area instead of extensive use of rip-rap. Many of the structures utilized

<sup>47</sup> USACE, Comments Regarding Draft Resource Reports (July 24, 2013), available at [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14132569](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14132569).

<sup>48</sup> Current Tracking Table, at 76.

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to stabilize stream banks can also serve to enhance in-stream habitat for fish. Where the pipeline crosses under a stream, there should be an extended length on each side of the bank where the pipe is buried deeper.<sup>49</sup>

The Company responds by stating:

Constitution's New York Environmental Construction Plan provides BMPs related to natural stream design techniques. These techniques may be used in place of extensive rip-rap or hard armoring.<sup>50</sup>

The Company's response fails to indicate where the bed or bank of a stream would be disturbed, whether or not it intends to use Natural Stream Design techniques, and whether or not it intends to construct any pipeline under a stream. Alluding to its construction plan, without providing any indication of where the public or the agency can find the plan, is utterly insufficient. In addition, it sidesteps the issue by stating that it *may* use BMPs, rather than techniques that have a greater impact. The Company has failed to adequately respond to NYSDEC's request for an evaluation of disturbances and provide a discussion of the use of Natural Stream Design techniques. Without this information the NYSDEC cannot evaluate impacts. That assessment is required before the NYSDEC can issue a § 401 Water Quality Certificate, which is required for the Company to proceed.

### 5. Potential Water Withdrawals

NYSDEC requested that the Company evaluate the potential for water withdrawals:

The Applicant must evaluate potential water withdrawals that would exceed 100,000 gallons per day (gpd), either from surface or groundwater, and identify procedures to ensure that water withdrawals less than 100,000 gpd do not compromise the required bypass flow (the minimum stream flow at any particular stream point necessary to protect fisheries resources). If proposed NYSDEC regulations pertaining to water withdrawals that exceed 100,000 per day become effective prior to the start of project construction, withdrawal reporting or permit application obligations or updated withdrawal reporting may be required.<sup>51</sup>

The Company responded by stating, "Constitution will submit applications to the SRBC, DRBC, and NYSDEC for water withdrawal and will comply the conditions."<sup>52</sup> Once again, the Company has failed to submit information that is required for an environmental analysis. Simply stating that it intends to comply with permit conditions is not a substitute for actually supplying

<sup>49</sup> NYSDEC Preliminary Comments on Application (July 17, 2013), *available at* [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14131052](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14131052).

<sup>50</sup> Current Tracking Table.

<sup>51</sup> *Id.*

<sup>52</sup> Current Tracking Table, at 71.

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the information NYSDEC needs to take a hard look at the environmental impacts of the Company's substantial water withdrawals. The DEC has stated that it wants the information integrated in an EIS, and should withhold the required permits if the Company does not comply.<sup>53</sup>

### 6. Evaluation of Horizontal Drilling

NYSDEC asked that the Company to evaluate Horizontal Directional Drilling (HDD) for every stream crossing in the following request:

NYSDEC maintains strict adherence to in-stream work windows and all stream crossings, including temporary or permanent installation bridges and pipelines, must comply with appropriate warm and cold-water fishery windows. The allowable fishery construction window for (T) & (TS) designated waters is June 15 through September 30. Additionally, equipment access roads may also be subject to jurisdictional requirements and NYSDEC staff estimates that the proposed pipeline will include at least 11 such crossings over protected trout streams. Within stream crossings, pipelines should be buried at least 6' below a stream bottom. Minimum cover depth is not subject to variance based upon field conditions. NYSDEC also maintains jurisdiction of up to fifty feet (50') of stream bank width along protected streams, including any activity which would disturb the stream bank; stream crossings, right-of-ways or any other road or disturbance are also included within NYSDEC's jurisdiction.

For streams and wetlands, the preferred method for crossing is Horizontal Directional Drilling (HDD) because it has the advantages of minimizing land disturbance, avoiding the need for dewatering of the stream, leaving the immediate stream bed and banks intact, and reducing erosion, sedimentation and Project-induced watercourse instabilities. The Applicant should also evaluate cases where other methods are proposed, for instance the Applicant should explain why HDD will not work or is not practical for each specific crossing. Where HDD will be utilized, the Applicant should: ensure that HDD staging areas remain outside of regulated boundaries (e.g., state-wetland 100 foot adjacent area and 50 feet from protected streams); describe the typical work area required and protective measures that will be used to limit runoff of sediment and HDD fluids into streams and wetlands; and develop contingency plans for any HDD failure that results in sediment and/or drilling fluid entering a wetland or stream.<sup>54</sup>

The Company responded as follows in the Superseded Tracking Table, but deleted the request and answer in the Current Tracking Table:

<sup>53</sup> NYSDEC Comments on Scope of Work (Nov. 7, 2012), available at [http://elibrary.ferc.gov/idmws/file\\_list.asp?accession\\_num=20121106-5145](http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20121106-5145).

<sup>54</sup> NYSDEC Preliminary Comments on Application (July 17, 2013), available at [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14131052](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14131052).

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Constitution is evaluating the feasibility of incorporating measures that would provide additional protection to NYSDEC regulated wetlands with respect to activities within the defined 100-foot Adjacent Area (i.e., wetland buffer). Constitution will continue to consult with the NYSDEC on this matter and will incorporate where feasible, any modifications relative to the regulatory requirements of the Freshwater Wetlands Act into the construction and design plans.<sup>55</sup>

The Company later explained that:

A trenchless feasibility study has been conducted for areas identified by FERC in their August 29, 2013 Environmental Information Request. A report outlining the results of the study and the wetlands and waterbodies where a trenchless construction method is proposed is provided in Appendix N of the November 2013 supplemental filing.<sup>56</sup>

However, NYSDEC asked for an HDD evaluation at every crossing, not just the areas identified by FERC. The Company has failed to provide the detailed evaluation required by NYSDEC, or explain why the preferred method will not be used at many stream crossings. To comply with FERC Request Number 1, and the agency's requirements, the Company must either utilize the HDD method or explain why HDD will not work, or is not practical, for each specific crossing.

### 7. General SPDES Permit

NYSDEC requested information adequate for it to determine whether or not it can issue a General SPDES Permit. Specifically, the agency stated:

The Applicant must provide detail sufficient for NYSDEC to make a determination regarding the applicability of the SPDES Stormwater General Permit for Construction Activities (GP-0-10-001) (General Permit) to the proposed Project, or whether an individual SPDES Permit would be required. A linear utility construction project of this nature may be granted authorization under the SPDES General Permit. However, Part 1, Section D.7, of the General Permit does not authorize discharges from construction activities for linear utility projects that: a) are tributary to waters of the state classified as AA or AA-s; and b) disturb two or more acres of land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey for the County in which the disturbance will occur.<sup>57</sup>

<sup>55</sup> Superseded Tracking Table, at 3.

<sup>56</sup> See Current Tracking Table.

<sup>57</sup> NYSDEC Preliminary Comments on Application (July 17, 2013), available at [http://elibrary.ferc.gov/dmws/file\\_list.asp?document\\_id=14131052](http://elibrary.ferc.gov/dmws/file_list.asp?document_id=14131052).



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cont'd

The Company responded by stating:

Constitution has prepared and submitted, as a supplement to the draft filing, an Environmental Construction Plan (ECP) for construction activities performed through New York. The ECPs detail the Best Management Practices (BMPs) that will be implemented during and after construction to minimize for potential impacts to the surrounding environment. The BMPs will be used to minimize erosion of disturbed soils and prevent the transportation of sediment outside of the construction ROW, into environmentally sensitive areas such as wetlands, and waterbodies. The ECPs provide specifications for the installation, implementation, and maintenance of the BMPs while allowing for flexibility in the selection of specific BMPs based on site-specific conditions. This document will be included as part of the construction contract and will provide contractors and Environmental Inspectors (EIs) a reference to specific environmental conditions and associated BMP plans and procedures. Additional detailed information relative to the BMP standard details, specifications and maintenance/monitoring procedures outlined in the ECPs can be found in Volume II, Appendices I and J.<sup>38</sup>

Once again the Company has stated that instead of providing the information requested by the agency within the EIS, it will do so someplace else. This is not acceptable, and the environmental review should not proceed until the Company complies with all requests.

### VIII. SOME OF THE COMPANY’S PURPORTED RESPONSES REFERENCE HUGE VOLUMES OF MATERIALS.

In many instances, the Company responds to agency requests by citing huge portions of the Resource Reports. Requiring the agencies and the public to dig through mountains of text to find a response to a straightforward question is simply another example of the Company’s “war of attrition” against the agencies and the public. By citing unnecessarily large portions of text, it appears that the Company is trying to wear down the agencies and the public, in hopes that they will give up trying to find responses to agency requests.

For example, USACE requested information on various subjects, and in almost every response, the Company refers to enormous amounts of material:<sup>39</sup>

USACE Request (subject matter)	Company’s Response (location in Report)
1. Mitigation of Impacts	See Resource Report 1, pages 2-107

<sup>38</sup> Superseded Tracking Table, at 4.

<sup>39</sup> Superseded Tracking Table, at 8.

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COMPANIES AND ORGANIZATIONS

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2. General Construction Procedures	See Resource Report 1, pages 2-59
3. Sensitive Surface Waters	See Resource Report 1, pages 2-52
4. Aboveground and Pipeline Appurtenant Facilities	See Resource Report 1, pages 2-43

The Company refers to enormous amounts of material in reply to NYSDEC comments as well:<sup>60</sup>

NYSDEC Request (subject matter)	Company's Response (location in Report)
1. Permits, Licenses, Approvals, NYSDEC-11	See Resource Report 1, Section 1.1.2.2, page 1-60 and Section 1.6, page 1-67
2. Groundwater Resources, NYSDEC-13	See Resource Report 1, Section 1.9.4.1.1, page 1-93
3. Threatened and Endangered Species, NYSDEC-16	See Resource Report 1, Section 1.9.4.3, page 1-101
4. Socioeconomics, NYSDEC-17	See Resource Report 1, Section 1.9.4.5, page 1-103
5. Land Use, Recreation, Special Interest Areas, and Visual Resources, NYSDEC-19	See Resource Report 1, Section 1.9.4.7, page 1-105
6. Air Quality, NYSDEC-20	See Resource Report 1, Section 1.9.4.8, page 1-107

This sort of gamesmanship is inappropriate, and should not be countenanced by FERC.

IX. FERC SHOULD REQUIRE THE COMPANY TO RESPOND TO THE PUBLIC'S CONCERNS.

FERC's regulations for implementing NEPA explicitly require that FERC "comply with the requirements of 40 C.F.R. § 1506.6 of the regulations of the Council [on Environmental Quality] for public involvement in NEPA."<sup>61</sup> Under 40 C.F.R. § 1506.6(a), agencies are required to "[m]ake diligent efforts to involve the public in preparing and implementing their NEPA procedures." Moreover, "[t]he regulations promulgated by the Council on Environmental Quality are mandatory, not hortatory. They require that an agency give environmental information to the

<sup>60</sup> Superseded Tracking Table, at 4-6.

<sup>61</sup> 18 C.F.R. § 380.9(a)(1) (2013).

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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public and then provide an opportunity for informed comments to the agency.<sup>62</sup> This process of disclosing information to the public must occur before the agency has reached its final decision on whether to go forward with the project.<sup>63</sup>

The public has submitted over 95 percent of the comments in Docket No. PF12-9. Members of the public, including organizations like Stop the Pipeline, have poured time, effort, and resources into preparing comments for agency review, with the understanding that they would be considered by FERC. However, FERC has ignored these public comments, and has not directed the Company to respond to *any* of them. This is evident in FERC's Request No. 1, wherein FERC requested the Company to respond only to the *agencies'* comments. Ignoring a thousand public comments falls short of FERC's requirement to "[m]ake diligent efforts to involve the public in preparing and implementing their NEPA procedures."<sup>64</sup> Accordingly, in the interest of fulfilling its mandate, FERC should require the Company to adequately respond to the comments submitted by the public. Doing otherwise is like treating interested members of the public like children, who may be seen but not heard.

### X. CONCLUSION

This evaluation of the Applicant's purported responses to FERC's Request No. 1 makes obvious that the Company has failed to adequately respond to the USACE's and NYSDEC's requests for information. Although analyzing the remainder of FERC's 40-page EIR is beyond the scope of this comment, STP has grave concerns that this inadequacy permeates the rest of the responses as well. This presents a huge problem for the Company, FERC, and the agencies. In light of the Company's deficient responses, FERC must delay its draft EIS until the Company abandons its evasive approach and does what it has been asked to do. A transparent tracking table must be created and furnished to the public to ensure this has been accomplished. And FERC should show the required respect to the public by asking the Company to respond to their comments as well.

As for the agencies, in order to grant their respective permits, they must have the information they have requested, fully integrated into the EIS, in order to take a hard look at the environmental impacts of the entire project, as required by their respective enabling acts, statutes, and regulations. The USACE and NYSDEC will be left with no choice but to deny the permits they are authorized to grant—and that must be obtained by the Company in order for this

<sup>62</sup> 40 C.F.R. §§ 1501.4, 1506.6 (2013).

<sup>63</sup> *Sierra Nevada Forest Protection Campaign v. Weingardt*, 376 F. Supp. 2d 984 (E.D. Cal 2005) (citing 40 C.F.R. § 1500.1(b)).

<sup>64</sup> 40 C.F.R. § 1506.6(a) (2013).

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project to move forward—unless the Company responds to each and every request in detail, and in a direct and truthful manner.

Respectfully submitted,



Daniel E. Estrin  
Supervising Attorney



Anne Marie Garti  
Legal Volunteer

/s/ John Dalo  
Legal Intern

/s/ Michael DiCato  
Legal Intern

Copy: Service List  
U.S. Army Corps of Engineers  
NYS Department of Environmental Conservation  
Stop the Pipeline  
(all via email)

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**COMPANIES AND ORGANIZATIONS**

**CO42 – Stop the Pipeline (cont’d)**

Exhibit 3

Hudsonia Report

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# COMPANIES AND ORGANIZATIONS

CO42 – Stop the Pipeline (cont'd)



**HUDSONIA**

**Review of the DEIS and Technical Report  
for the Constitution Pipeline**

Prepared by Erik Kiviat PhD (Hudsonia)  
and David C. Richardson PhD (SUNY New Paltz)

Hudsonia Ltd  
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845-758-7053

Report to the Pace Environmental Litigation Clinic Inc.

31 March 2014

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

### Summary

In this report, we review aspects of the Draft Environmental Impact Statement (DEIS) for the Constitution Pipeline proposed from Susquehanna County, Pennsylvania to Schoharie County, New York. We focus on potential impacts of the pipeline to streams, riparian areas, and wetlands in New York. We address these issues by considering the impacts pipeline construction and operation are likely to have on water quality and other chemical and physical components of ecosystems, and then analyzing the probable effects of those changes on rare or vulnerable organisms.

The pipeline project would affect stream channel configurations, increase turbidity and suspended sediment in surface waters, increase nutrient loading of surface waters, reduce dissolved oxygen (DO), change sediment characteristics of stream and wetland bottoms, remove water from streams, and remove riparian vegetation. Some of these changes would last for a few days or weeks and some almost certainly would last more than a season. For example, deposition of any significant amount of added sediment on stream and wetland bottoms would change those bottoms for more than a season.

We discuss how stream conditions should be monitored before and after construction.

Regarding the biota potentially affected by the pipeline project, we focus on those New York State Species of Greatest Conservation Need (SGCN) known from the general area of the proposed pipeline. The SGCN include endangered and threatened animal species, as well as those that are vulnerable to endangerment or about which too little is known to consider them resistant to endangerment.

Among the stream and wetland species most vulnerable to impacts such as those of pipeline construction are marsh birds, northern harrier, bald eagle, hellbender, wood turtle, salamanders with aquatic larvae, brook trout, pearly mussels, dragonflies with burrowing larvae, and a number of wetland, stream, and riparian plants such as threadfoot and goldenclub. Rare species surveys for the DEIS were limited to a few species and selected small areas of the pipeline corridor. Much more survey work for rare species is needed before the regulatory agencies will be able to accurately determine which species are at risk of long-term negative impacts from the pipeline project.

Invasive species such as didymo, *Phragmites*, and certain emerging wildlife pathogens could easily be transported from one work site to another on construction equipment and personnel, and then colonize disturbed and undisturbed habitats.

Other important considerations in environmental assessment of the Constitution Pipeline include cumulative impacts of the pipeline combined with many other types of utility, transportation, residential and commercial development, mining, forestry, agriculture, and other activities that affect streams, riparian areas, and wetlands. Some of these immediate human influences may be exacerbated by climate change. And the pipeline would also promote growth of shale gas development nearby, if high volume horizontal hydraulic fracturing is permitted in New York. Further evaluation is needed to determine the ecological effects of additional gas development and pipeline links to local municipalities along the route.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

### Introduction and Background

The Pace Environmental Litigation Clinic (PELC) asked Hudsonia to review and comment on the Draft Environmental Impact Statement (DEIS) issued by the Federal Energy Regulatory Commission for the Constitution Pipeline Project and Wright Interconnect Project. We focused on those aspects of the proposed Constitution Pipeline that are relevant to the environmental quality of streams, associated riparian habitats, and wetlands along the pipeline route. These habitat types constitute small areas of landscapes but are disproportionately important for the ecosystem services they provide, including water supply, fisheries, and the support of biological diversity. Streams, riparian corridors, and wetlands are also especially vulnerable to the impacts of development projects because degradation of water quality via sedimentation, changes in flows, and other effects of construction can propagate with water movements and affects entire habitat complexes and food webs.

Hudsonia is a nonprofit environmental research institute that does not advocate for or against development projects. Rather we collect and analyze scientific data, review documents, assess biodiversity, predict the impacts of development projects, and if appropriate make recommendations for reduction of those impacts. Because of the time frame of the current review, our work was limited to reviewing selected portions of the Draft Environmental Impact Statement (DEIS) and associated documents for the Constitution Pipeline, surveying relevant published literature, and analyzing the potential impacts of pipeline construction and operation along the proposed route in New York.

The proposed pipeline route is approximately 124 miles long from Susquehanna County, Pennsylvania, to Schoharie County, New York. More than 97 miles pass through Broome, Chenango, Delaware, Otsego, and Schoharie counties in New York. The pipeline would cross 277 water bodies and 90 acres of wetlands (Desnoyers 2014). Several alternate routes have been proposed for the pipeline, and we do not know what the ultimately selected route may be, so we have focused more on the general impacts of pipeline construction and operation than on impacts to specific sites (with a few exceptions).

In the first portion of this report, we discuss physical and chemical impacts to streams and wetlands that will affect water quality as well as the quality of habitats for rare and common species. In the second portion, we discuss some of the rare, vulnerable, or little-known organisms of the area that are likely to be affected by pipeline construction and operation.

### Stream and Riparian Habitats

Streams (or rivers), their banks and floodplains, and nearby areas that strongly influence stream ecology are very important to biodiversity including many rare species of wildlife and plants. Some of the stream and riparian species that occur in the general area of the proposed pipeline and that are listed by the New York State Department of Environmental Conservation (DEC) or New York Natural Heritage Program (NYNHP) as of conservation concern are discussed below. In general, to maintain viable populations of these organisms, streams must not be degraded by more than minor or temporary inputs of sediment (turbidity), macronutrients (principally nitrogen and phosphorus), chemical pollutants (such as petroleum hydrocarbons or pesticides); alterations of flows (minimum or maximum flows or patterns of flow; barriers that inhibit movement of organisms up or down stream; more than minor removal of



# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

existing vegetation on banks and riparian areas; introduction and proliferation of harmful (“invasive”) organisms; loud noise; and other impacts of human activity. In the discussions of biota in the second portion of this report, a few of the potential negative impacts of pipeline construction on streams are mentioned.

### Wetland Habitats

Wetlands are also critical habitats for biodiversity, and like streams vulnerable to many impacts of human activities because wetlands and streams collect water and pollutants from the surrounding landscapes. Wetlands are sensitive to essentially the same types of impacts as are streams. Maintaining existing hydropatterns (the pattern of water level or depth in space and time), as well as water quality, is one of the most important principals of managing wetlands for biodiversity. Although wetlands are often “restored” to repair or improve their ecological structure and function, wetland restoration is commonly effective for some functions and not others, and many functions (including the support of characteristic assemblages of organisms, and other ecosystem services) take decades or longer to restore (Moreno-Mateos et al. 2012). Generally, those organisms that are more habitat-specialized or more adapted to low-nutrient environments will be more vulnerable to construction impacts and more difficult to maintain or restore. Both large and small wetlands are important for their ecosystem services and biodiversity.

### Aquatic Ecology Issues

#### Importance of Headwater Streams and Wetlands

Headwater streams are a large component of the stream network and comprise 95% of all stream channels and the great majority of the stream channel length in the United States (Leopold 1964). Headwater streams form an intricate relationship with the surrounding landscape because of their small size and high drainage density (Gomi et al. 2002). As such, they are also most susceptible to anthropogenic manipulations and disturbances to the landscape and are easily harmed. Further, multiple degraded headwater streams within one watershed can result in cumulative effects on downstream water quality and biota even if the effect in any one individual stream is small. Increased development (e.g., urbanization, road densities, and other watershed modifications) are correlated with increased salt concentrations in streams, decreasing water quality, and decreasing macroinvertebrate community diversity (Paul and Meyer 2001) sedimentation

The effects of the pipeline on aquatic ecosystems need to be considered on the individual stream reach, pond, lake, or wetland scale but also on the watershed scale where the cumulative effects of headwater stream degradation might affect downstream populations and species. Construction of multiple pipeline crossings within a watershed or stream/river could have cumulative detrimental effects that do not allow time for recovery (Lévesque and Dubé 2007). In this DEIS, it is not clear how many locations will be affected by stream crossings within each watershed and subwatershed. Additionally, the DEIS does not carefully consider if there are additional small streams and wetlands that will be encountered in the field, especially in locations that have not yet been surveyed and are not on U.S. Geological Survey or other maps, and the DEIS has not provided contingency plans for those stream crossings.

CO42-60

Watersheds that would be crossed by the proposed pipeline project are listed and discussed in section 4.3.3 of the EIS, and table 4.3.3-1 lists the areas of the project by milepost that would be within each watershed. Individual waterbodies and wetlands that would be crossed are listed by milepost in appendices K and L, respectively. Information regarding watersheds potentially affected by other projects relevant to the cumulative impacts analysis is provided in section 4.13 of the EIS.

Field data would be used to confirm information obtained from desktop data sources (if the project is certificated), which have been used to identify waterbodies and wetlands in certain locations on a provisional basis pending acquisition of field survey access. See section 1.2 of the EIS and the response to comment FA4-3. If new waterbodies or wetlands are discovered during subsequent field surveys or during construction, construction methods would be as described in sections 4.3.3 and 4.4 of the EIS, and the crossings would be completed in consultation with the permitting agencies including the FERC and the COE.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-61 There is a potential for the pipeline to increase transport of gas from 650,000 to a maximum of 850,000 Dth/d (dekatherms per day), an increase of 30.8%. The 30 inch pipeline could induce development of private gas wells – how many other stream crossings or access roads would be needed during that additional build-out and how would that impact watersheds with current deforestation and stream crossings?

CO42-62 The hyporheic zone in streams is an active area between the surface water and groundwater. This zone plays a critical role in the exchanges of water, nutrients, and organic matter from the surface water to groundwater and groundwater to surface water (Boulton et al. 1998). The transition zone or interface is an important location of ecosystem function like nutrient processing and unique hyporheic species of macro- and micro-fauna. In this DEIS, there is no consideration of the long-term effects of permanently installing a pipeline below the stream channel on the hydrology, temperature, ecosystem function, and biology of the hyporheic zone.

### Sedimentation

Stream sediment yields increase during construction and deforestation within a watershed, especially near and in channel projects and at locations with steep slopes (Beschta 1978, Wellman et al. 2000, Paul and Meyer 2001, Lane and Sheridan 2002). Most of the sediment yield from construction occurs during relatively few large episodic storm events and floods (Wolman 1967). However, these storm related pulses of sediment can have long term effects on downstream geomorphology and biota. Pipeline stream crossings, in particular, have the potential to generate sediment pulses over the course of construction (Moyer and Hyer 2009, Reid et al. 2004) with harmful downstream effects to water quality through increases in total suspended solids, physical habitat through modification of substrate particle size and channel morphology, macroinvertebrate abundances and community structure, macroinvertebrate drift, and fish behavior and physiology (Lévesque and Dubé 2007). Additionally, sediment fluxes represent downstream movement of nutrients like phosphorus (Meyer 1979). The impacts in each stream will vary depending on the pre-construction function and health of the stream, the resilience of the stream to environmental stressors, and the cumulative upstream impacts. Smaller streams, given their small size relative to anthropogenic disturbance, will potentially be affected more. Additionally, the speed of recovery will vary among streams depending on the timing and duration of the disturbance, as well as the refugia, connectivity, and mobility to other populations for the biota. For example, if a large storm occurs simultaneously with the construction phase, the sediment yield will likely be increased and the effects seen further downstream and over a longer time period.

CO42-63 In this DEIS, stream, bank, and upland sediment will erode during construction activities within the landscape. The pipeline will cross 42 waterbodies using a trenchless method (HDD, Direct Pipe, or conventional bore). This will minimize in-stream disturbance except for the drilling locations and possibility of leaking drill fluids (or blowouts into the stream channel from below). Dry crossing methods are proposed for the remaining 235 waterbodies but the option is left open for wet, open-cut crossing methods if a dry crossing is infeasible. The applicant should clarify what conditions would make a dry crossing infeasible and who would make the decision to apply for a wet, open-cut crossing methods given the increased sediment yields expected with open-cut crossings (Reid et al. 2004). The time window for construction, because of trout spawning, coincides with the season for large summer

CO42-61

See the responses to comments CO26-10 and CO26-11.

CO42-62

Waterbodies and wetlands would be restored as described in sections 4.3 and 4.4 of the EIS, including the use of trench breakers that would reduce the possibility of changes in subsurface groundwater flow patterns in the hyporheic zone. See the responses to comments CO41-15 and CO42-48. Also, see the response to comment CO41-54 for impacts from operation of the project.

CO42-63

Erosion and sedimentation, as well as erosion control measures, are discussed throughout the draft EIS, particularly in sections 2, 4.2, 4.3, and 4.4. No waterbodies are currently proposed to be crossed under “wet” open-cut trenching methods; see section 2.3.2.2 of the EIS. Constitution could request to use wet open-cut methods only if dry open-cut methods were found to be infeasible such as an inability to maintain an effective seal on the diversion structures due to stream geomorphology. The justification and proposal for any alternative crossing method would require additional review and approval by the COE, the PADEP, the NYSDEC, and the Commission before it could be implemented.

Precipitation is fairly evenly distributed on an average monthly basis (2.3 inches in February to 4.1 inches in July for Albany, New York) within the project vicinity (weather.com 2014). The winter months (December through February) are somewhat drier than the other months. This information has been added to the EIS. The potential for flash flooding is discussed in section 4.1.3.5 of the EIS, where we also noted that Hurricane Irene and Tropical Storm Lee occurred in the months of August and September, 2011. Appropriate erosion and sedimentation controls would be installed to prevent sediment migration from cleared or disturbed areas during storms in accordance with Constitution’s Plan and Procedures, which are based on the FERC’s standard, and the ECPs.

Sedimentation caused by the removal of woody debris would be contained within the dewatered zones of the dry waterbody crossings and the stream channel would be restored following pipeline installation. See the response to comment FA4-7 regarding equipment bridges. These measures would prevent or adequately minimize the mobilization of sediment to downstream areas.

Climate data accessed at website:

<http://www.weather.com/weather/wxclimatology/monthly/graph/12222 on May 5, 2014>.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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CO42-63  
cont'd

storms and hurricanes; there was no analysis of the frequency and size of storms relative to the construction areas. This is especially important in the 14.4 miles of New York construction zones with > 15% slope where erosion of denuded soils is likely to increase during precipitation events (Dosskey et al. 2010). Summer storms are increasing in magnitude (e.g., Klug et al. 2012) and are predicted to increase further in magnitude and frequency (Diffenbaugh et al. 2005; 2013). There are many stream crossings proposed for this project, but there is no analysis of the accident rate or failure of sediment containment for crossings. Given a failure rate of even < 5%, that still leaves 10 or more streams that will have substantial long-term damage from construction. For in-stream construction, all large woody debris and debris dams will have to be removed. Large woody debris and debris dams can contain sediment that has been stored for years and removal can stimulate large pulses of sediment downstream (Beschta 1979, Gurnell et al. 1995). There is no plan for containment of sediment due to removal of in-stream debris. Permanently installed road crossings, bridges, and culverts have long-term negative effects on sediment characteristics downstream of the installation after construction has been completed (Wellman et al. 2000). This has the potential to cause long-term increases of turbidity beyond natural conditions.

### Riparian Cover

Streamside (riparian) forests are an important component of stream ecosystems. This is especially true with small streams that are more integrated into the landscape. Here, the riparian vegetation plays a greater role in providing organic matter as a basal resource for stream food webs, regulating temperature, removing nutrients, and stabilizing stream banks (Dosskey et al. 2010). Removal of riparian vegetation negatively affects the stream ecosystem and biota and can result in stream bank and bed erosion, bank failures and undercutting, and increased stream temperatures (Sweeney et al. 2005). Riparian vegetation removal at the stream crossings will range from 110 feet for construction to 50 feet for permanent ROW removal. The "right-of-way would be seeded within six working days following final grading" (DEIS, page 2-18), but it "may take decades before these areas resemble the forest vegetation that was present before construction" (DEIS, page 4-75). For coldwater fisheries, the construction window ends on September 30 (DEIS, Table 4.6.2-1). The replanting of riparian vegetation would have minimal growing season time to establish and the denuded riparian soils would be susceptible to erosion due to winter storms, freeze-thaw cycles, winter snow melt, and spring floods (Wynn and Mostaghimi 2006).

### Water Loss and Water Movement

CO42-65

The timing and quantity of water flow is critical to the sustainability of freshwater biotic communities, ecosystem function, and the goods and services on which humans rely (Poff et al. 2009). Setting minimum flow standards is critically important as well as maintaining a natural flow regime including variability (Poff et al. 1997). In Table 4.3.3.-5, several streams are identified as having large volumes of water removed for hydrostatic testing to "verify the integrity of the pipeline." This leads to multiple questions about the potential water withdrawal and the effect on downstream ecosystems. First, at what rate would the water be removed, especially with respect to the flow of the stream? How long will the dewatering take place? Low flows can reduce the abundances of fish species that are adapted for fast flow and promote different assemblages that are more general in their preferences (Freeman and

CO42-64

The soils in cleared riparian areas would be stabilized during restoration with permanent grasses, temporary grasses, or temporary mulch depending on the season. The use of netting or matting made of jute, wood excelsior, or similar materials may be used to anchor mulch where needed. Following construction, Constitution would allow a 25-foot-wide riparian strip along each waterbody bank to revegetate with native flora in order to stabilize banks, reduce erosion impacts, and provide shading and cover for fisheries resources; however, a 10-foot-wide corridor may be permanently maintained in an herbaceous state directly above the pipeline to facilitate pipeline inspections.

CO42-65

Constitution would ensure that base flows are maintained in the source streams during the water withdrawals for hydrostatic testing process as stated in section 4.3.3.5 of the EIS. This maintenance of flow should prevent adverse effects such as changes in stream temperatures and diel temperature cycles. Hydrostatic testing typically lasts several hours to days; Constitution stated that water would be held for a maximum of 14 days. The month that hydrostatic testing would occur may change because it would depend on the rate at which construction occurs, as well as the dates upon which all permitting agencies issue final approvals. Constitution intends to submit water withdrawal permit applications to the Susquehanna River Basin Commission, the Delaware River Basin Commission, and the NYSDEC; the withdrawals would also be subject to the conditions of those permits. Further, our Procedures require that Constitution maintain adequate flow rates to protect aquatic life, provide for all waterbody uses, and provide for downstream withdrawals of water by existing users.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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CO42-65  
cont'd | Marceinek 2006). When would the water be removed? It was not clear in the DEIS if the hydrostatic testing would occur during the summer when there is the highest potential for a low flow or drought period. Finally, how would the water withdrawal affect the diel temperature cycles?

CO42-66 | In section 4.3.3.5, the water removed for the hydrostatic testing would be discharged in 'upland forests' within the same watershed. What is the rate of discharge? Would the discharge be in one location in each watershed? Erosion would likely occur if millions of gallons of water are discharged in the same location. It was unclear if the underlying geology, soil permeability, soil depth, slope, and biota would be considered when choosing an upland location. Further, the distance from the discharge location to headwater streams is critically important to understand if sediment, water, and nutrients would be added to the stream network. This would especially occur in areas with steep slopes and shallow or wet soils. Hydrostatic discharge water from pipelines contains polycyclic aromatic hydrocarbons (PAHs) and other hydrocarbons (Eiceman et al. 1984, Kishawy and Gabbar 2010). The DEIS did not indicate if the water would be tested for any contaminants. Similarly, in section 4.3.3.5, the HDD drilling mud would be "disposed of at an approved upland location." How would drilling mud, with small clay particles, affect the turbidity in small upland streams?

### Monitoring Protocols

Monitoring multiple variables is necessary to effectively and objectively determine if stream crossings, vegetation removal in ROWs, and restoration have an effect on water quality and quantity. The most effective and realistic monitoring design is the Before-After-Control-Impact (BACI) design (Smith 2002, Lévesque and Dubé 2007). The BACI approach is often used as a basis for impact assessment and cumulative effects in stream ecosystems (Lévesque and Dubé 2007). A BACI design requires both pre- and post-disturbance monitoring of the sections of streams above and below the impact site. This allows the monitor to determine post-construction effects after establishing pre-construction conditions and accounting for upstream inherent variability in the response variables (e.g., Moyer and Hyer 2009).

CO42-67 | Most of the current information about the biological communities in the pipeline area comes from the DEC but there is little to no information about current chemical and physical conditions or aquatic non-fish biological communities outside of a few mussel species. There are several facets of the construction process that require monitoring including clearing of ROWs, trenchless and dry stream crossings, restoration of the stream banks, and revegetation. The response variables that would be measured are unclear as is who will be carrying out the monitoring. For example, in-stream monitoring could include assessments of water quality (turbidity, total suspended solids, total water column phosphorus, temperature, and pH), physical habitat (substrate particle size and channel morphology), benthic invertebrate community (abundances, densities, diversity, water quality indices using macroinvertebrate metrics), macroinvertebrate drift and survival, fish abundances and physiology, biotic recolonization rates, and ecosystem function (metabolism, nutrient cycling).

The riparian vegetation reseeded and growth would occur over a longer time period. Will monitoring ensure that native vegetation has effectively taken hold in both the restored streamside areas and the ROWs?

CO42-66

See the response to comment FA4-24. Although Constitution stated that the hydrostatic discharge locations had not yet been determined, it is likely that discharge would occur at or near the source or test segment locations identified in tables 4.3.3-5 and 4.3.3-6 of the EIS. The use of dewatering structures would minimize erosion and sedimentation. Testing of hydrostatic water discharges is typically not required for new pipe.

Constitution would be required to dispose of drilling fluids in accordance with section III.E of its Plan, at either an approved disposal facility such as a landfill or possibly at an approved upland location where there may be a beneficial re-use such as a soil amendment. If drilling fluids were placed in an upland location, then landowner approval, survey, and permit conditions, including sediment and erosion control, would apply.

CO42-67

See the response to comment CO41-12. There are no current plans for monitoring of water quality, biological conditions, or post-construction recovery at stream crossings although these items could be the subject of other permitting requirements. At a minimum, the status of revegetation at riparian areas would be assessed after the first two growing seasons, and remedial action would be taken if needed. The right-of-way would be observed and mowed about once every three years during regular maintenance; any longer term revegetation issues could be addressed as necessary. Constitution would allow riparian areas at least 25 feet wide to permanently revegetate across the pipeline right-of-way at each waterbody crossing (except for a 10 foot-wide corridor centered over the pipeline) to facilitate bank stabilization, stream shading, and to provide wildlife habitat as stated in section 4.6.1.4 of the EIS. See the response to comment FA4-12 regarding the FERC's compliance monitoring program.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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CO42-67 cont'd	Another important aspect of monitoring is independent monitoring of construction while it is occurring. Some of the adverse impacts of construction projects can be avoided or reduced if independent personnel are in the field continuously at each stream and wetland crossing to ensure that contractor activities adhere strictly to environmentally sound protocols and permit conditions.
	Other General Concerns
CO42-68	The DEIS defines temporary impacts on vegetation as the return "to pre-construction conditions almost immediately after construction," short-term impacts as the return to pre-construction conditions within 3 years, and long-term as more than 3 years to revegetate (DEIS, page 4-74). Throughout the DEIS, the conclusions state that there are no long-term impacts on aquatic ecosystems and resources (e.g., Section 4.3.4, page 4-58) without defining short- vs. long-term impacts. What are the actual time spans of some of the impacts to streams including sediment load? Stream organisms often have short lifespans (<1 year) and react to anthropogenic impacts at a shorter scale.  The DEIS identified a number of critical issues that the Applicant needed to address before the end of the DEIS comment period had ended; some of these points are emphasized below.
CO42-69	1-Provide site specific justification for any permanent fill of waterbodies for crossings (DEIS, page 4-45). Filling in a waterbody, especially a headwater stream, would constitute a long-term impact and source of sediment for downstream ecosystems. The same is true for wetlands.
CO42-70	2-The applicant should provide a description of impacts for each waterbody that is not directly crossed by the pipeline but is in the construction ROW (DEIS, page 4-52). The riparian area has an important role in maintaining healthy stream ecosystems (see above). A road or cleared ROW running parallel to a stream or upslope of a stream, especially in areas with steep slopes, can have long-term harmful effects on a waterbody. There 58 waterbodies within the construction ROW, but little indication of the length of the stream channel that would be affected. Some examples from an examination of the topographic maps provided including MP67 where the Mainline Valve is at the top of a slope from several high gradient headwater streams, MP93 where the contractor yard is uphill from Titus Lake, and MP113-MP114 where the proposed pipeline comes close to Stander Lake and appears to be within the Stander Lake watershed, uphill of the lake. Between MP98-100, the pipeline crosses the corner of a pond/wetland and runs parallel to a stream for 1+ miles. There is one wetland crossing at MP98.61 for 25 feet and one stream crossing at MP98.62 for 42 feet. This is a major area of impact if the pipeline runs parallel and near the stream for a distance.
CO42-71	3-The applicant should adhere strictly to the NYSDEC construction window of June 15 to September 30 for all T and TS streams (DEIS, page 4-90).
CO42-72	4-The applicant should provide clear timing and magnitudes of the water withdrawal for hydrostatic testing in consultation with the DEC (DEIS, page 4-93). See above for concerns.
CO42-73	In section 4.3.2.1, Groundwater General Impact and Mitigation, several sentences are unclear. First, the applicant would test all water wells within 150 feet of construction prior to and after construction. What water quality parameters would be measured and at what frequency following construction? Would

CO42-68

Impact durations are defined in section 4.0 of the EIS. Impacts on streams and aquatic life resulting from dry crossing methods are expected to be minor and generally occurring within the 48-hour crossing period. Most aquatic species, including macroinvertebrates, typically re-colonize disturbed areas within weeks to months. Temporary construction-related impacts associated with the use of dry crossing methods would be limited primarily to short periods of increased turbidity before installation of the pipeline during the assembly of the upstream and downstream dams and following installation of the pipeline when the dams are removed and flow across the restored work area is re-established.

CO42-69

No fill is proposed for waterbodies. See the response to comment FA4-26 regarding permanent fill in wetlands.

CO42-70

See the response to comment FA4-23 regarding potential impacts on waterbodies located within the construction right-of-way, but not directly crossed by the pipeline.

CO42-71

See the response to comment FA4-33 regarding fishery construction windows.

CO42-72

See the response to comment CO42-65.

CO42-73

Constitution would offer to landowners at least one pre-construction test and at least one post-construction test of private wells for the parameters as stated in section 4.3.2.1 of the EIS. See the response to comment FA4-3 regarding pending field surveys.



# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

S-615

CO42-73 cont'd	there be monitoring during construction? The applicant has "agreed to provide expert field assessments of seeps and springs within 150 feet of construction workspaces." Has the applicant surveyed the area for all seeps and springs within 150 feet of construction? Small seeps represent the start of headwater streams; they are hard to locate because even small topographic dips in the landscape could coincide with the water table. Field surveys help clearly identify perennial groundwater seeps through measuring the constant cold water temperature, flow during the summer, and through identification of specific plants. Groundwater flow is typically very slow and the impacts of construction might take days to months to surface in local springs and seeps. Evaluating changes in groundwater quality may not enable the monitor to halt construction if construction was to be completed in less than a week. How long will the monitoring take place after the construction has concluded?
CO42-74	In section 4.3.3.1, the Applicant would "restore the stream bed and banks" (DEIS, page 4-45) following removal of temporary water crossing. There is no indication of the restoration procedures or monitoring to ensure efficacy of restoration.
CO42-75	In section 4.3.3.4, the Applicant indicates that, according to FEMA, the areas with aboveground facilities would have a 1% chance of an annual flood event. What size is this flood event? Have the numbers been forecast with the potential increase in size and frequency of large rain events in the future?
CO42-76	<p>Biodiversity Issues</p> <p>Here we discuss animals and plants that will be most vulnerable to pipeline impacts, especially those species listed as endangered, threatened, special concern, or Species of Greatest Conservation Need (animals) by the DEC, as well as those vascular plants ranked S1, S2, or S3 by NYNHP. According to the DEC (<a href="http://www.dec.ny.gov/animals/9406.html">http://www.dec.ny.gov/animals/9406.html</a>):</p> <p><i>The State Wildlife Grants program provides funds for conservation efforts aimed at preventing fish and wildlife populations from declining, reducing the potential for these species to be listed as endangered. In order to access these grant funds, New York State was required to develop a Comprehensive Wildlife Conservation Strategy (CWCS) that focuses on the "species of greatest conservation need." This includes those species that are deemed rare, imperiled and those for which status has not been established.</i></p> <p>We consider all Species of Greatest Conservation need (SGCN) that use stream, riparian, or wetland habitats as potentially affected by pipeline construction and operation, and most of these species are discussed below. SGCN include officially listed endangered, threatened, and special concern species and additional species considered vulnerable or about which insufficient information is available to determine vulnerability. Because impacts of the proposed Constitution Pipeline, and many other development projects (including at least three other Pennsylvania-to-New York gas pipelines [Stilwell 2012, Appendix 1]), are large-scale and cumulative, Constitution Pipeline impacts to SGCN and other rare biota may be repeated widely throughout the ranges of many species and thus have overall effects on populations that may not occur in any one stream segment or wetland. Stilwell (2012) recommended a cumulative impact analysis of the Constitution Pipeline, other pipelines, highways, and other development projects. We would add to this residential and commercial development, mining, forestry,</p>

CO42-74

At waterbodies that would be crossed by the pipeline as well as those affected by access roads or bridges, any disturbance to stream banks or channels would be restored, typically with heavy construction equipment, to either match pre-construction contours or to a stable angle of repose if the EI determines that is necessary for bank stability. This process is in accordance with section V.C.3 of Constitution's Procedures, which are based on the FERC standard.

CO42-75

Section 4.3.3.3 actually stated "None of the proposed aboveground facilities, including Iroquois' project, would be within a FEMA flood hazard zone." The 1-percent annual chance flood (Zones A, AE) is also called the base flood or 100-year-flood by the FEMA (<http://www.fema.gov/floodplain-management/flood-zones>, website accessed on May 7, 2014). The 0.2-percent chance flood is the 500-year flood. Zone X has a moderate flood hazard with a risk between the 100-year-flood and the 500-year flood. The EIS has been updated with this new information. The information presented is based on current data provided by the Federal Emergency Management Agency.

CO42-76

Potential impacts on fish and wildlife (section 4.6), special status species (section 4.7), and cumulative impacts (section 4.13) are discussed in the EIS. Other species such as lichens and invertebrates may also be affected by the proposed projects, but population level impacts are not anticipated. Some of these species may be able to re-colonize the restored right-of-way.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

S-616

CO42-76 cont'd	<p>other energy development, and agriculture, because all of these land uses can generate impacts on streams and wetlands similar to those caused by pipelines.</p> <p>Of course the pipeline will affect rare species such as mosses that have been reviewed by the New York Natural Heritage Program but about which little is known, as well as rare species of groups such as lichens and many invertebrate groups that have not been officially reviewed, listed, or tracked by any federal or state agency. These other species are no less deserving of protection and conservation as the species discussed below, because they are genetically unique and, for example, contain unique chemical compounds that have potential pharmaceutical value.</p> <p>In this report, we use the term “sedimentation” to mean input of soil materials (sediment) of all particle sizes to surface waters caused by, or increased by, human activities. In this sense, sedimentation is the same as the term “siltation” often used in the environmental literature. We are not using the term sedimentation in the geological sense that includes erosion, transportation, and deposition of sediments.</p>
CO42-77	<p><b>Mammals</b></p> <p>Bats. Riparian corridors and wetlands are important foraging habitats for bats. The Indiana bat (<i>Myotis sodalis</i>; federally and state listed as endangered), northern bat (<i>Myotis septentrionalis</i>; proposed for federal listing as endangered), and small-footed bat (<i>Myotis leibii</i>; SC) are among the species that forage around wetlands and watercourses. Because sedimentation from pipeline construction may have short-term or long-term impacts on aquatic insects, the adult stages of which form part of the diet of bats, impacts on bats need to be considered.</p> <p>River otter (<i>Lontra canadensis</i>; SGCN). River otters use streams, ponds, lakes, and flooded wetlands for foraging. This species is widespread in New York and almost certainly occurs in the medium size and large streams proposed to be crossed by the pipeline.</p>
CO42-78	<p><b>Birds</b></p> <p>Many wetland and riparian bird species are among the most imperiled of all New York birds. Threatened species include pied-billed grebe (<i>Podilymbus podiceps</i>), least bittern (<i>Ixobrychus exilis</i>), northern harrier (<i>Circus cyaneus</i>), bald eagle (<i>Haliaeetus leucocephalus</i>), king rail (<i>Rallus elegans</i>), and sedge wren (<i>Cistothorus palustris</i>). Special Concern species include American bittern (<i>Botaurus lentiginosus</i>), osprey (<i>Pandion haliaetus</i>), red-shouldered hawk (<i>Buteo lineatus</i>), and cerulean warbler (<i>Setophaga cerulea</i>). Other SGCN birds of these habitats are black-crowned night-heron (<i>Nycticorax nycticorax</i>), American black duck (<i>Anas rubripes</i>), blue-winged teal (<i>Anas discors</i>), American woodcock (<i>Scolopax minor</i>), black-billed cuckoo (<i>Coccyzus erythrophthalmus</i>), Canada warbler (<i>Wilsonia canadensis</i>), and Louisiana waterthrush (<i>Seiurus motacilla</i>).</p> <p>The pied-billed grebe was reported in the pipeline area by NYNHP. This species breeds on small or large marshes with areas of shallow open water and patches of emergent vegetation. The bald eagle population in New York is expanding and nesting may occur in new localities near the pipeline. Stilwell (2012) and Conrad (2012, Appendix 2) reported that bald eagles have been known to breed in the area of</p>

CO42-77

Potential impacts on bats are discussed in sections 4.7.2 and 4.7.3 of the EIS. Given the localized nature of the proposed waterbody crossings, it is unlikely that impacts on macroinvertebrate impacts would affect bat foraging behaviors. The river otter was not identified as of concern for the project, and the NYSDEC did not request that this species be added to our discussion in section 4.7. Given the measures that would be used to prevent and minimize impacts on aquatic habitats as described in sections 2, 4.6, and 4.7 of the EIS, we conclude that potential impacts on the river otter would be mostly temporary and adequately minimized. See the response to comment FA4-31.

CO42-78

Potential impacts on birds (including bald eagles) and their habitats are discussed in section 4.5, 4.6.1, and 4.7 and these sections have been updated for the final EIS in relation to Constitution’s Preliminary Migratory Bird and Upland Forest Plan which was filed on May 6, 2014 ([http://elibrary.ferc.gov/0/idmws/file\\_list.asp?document\\_id=14213683](http://elibrary.ferc.gov/0/idmws/file_list.asp?document_id=14213683)).

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont’d)

S-617

CO42-78  
cont'd | the proposed pipeline. Bald eagles are sensitive to disturbance during the breeding season, approximately February to August, when pipeline construction activities might cause nest abandonment. Northern harrier breeds in extensive marshes, wet meadows, and possibly wet shrublands, as well as dry non-wooded habitats. Harriers are very sensitive to human intrusion during the nesting season. Red-shouldered hawk typically breeds in extensive, closed-canopy, mature forest, especially in or near wetlands. Forest fragmentation tends to reduce suitability of habitat for red-shouldered hawk and increase suitability for red-tailed hawk which is a more common species. One of the important breeding habitats for cerulean warbler is riparian forest with large trees, and this species is vulnerable to forest fragmentation. American woodcock breeds in wet shrubland or young forest, often in riparian areas or swamps. The species has declined severely rangewide in recent decades. Louisiana waterthrush usually nests on streambanks in microhabitats such as among exposed tree roots; we expect it to be vulnerable to altered hydrology that floods nests or causes collapse of banks during breeding season. All of the SGCN birds are to one degree or another sensitive to loss or alteration of breeding habitats and in some cases nonbreeding habitats. Many of these species are area-sensitive, that is, they require large areas of unfragmented habitat. Fragmentation of marsh habitat by the pipeline, for example, along with other impacts such as sedimentation and establishment of invasive plants, would be a long-term impact that could eliminate breeding by northern harrier, least bittern, and American bittern.

CO42-79 | Turtles

Snapping turtle (*Chelydra serpentina*; SGCN). Although the snapping turtle is a common species that inhabits many waterbodies and wetlands, local populations may be vulnerable to impacts of pipeline construction. Adults and juveniles may be injured or killed by construction equipment and vehicles; road mortality of this species is common in general. Well-drained, friable, upland soils created by construction disturbance often attract nesting females in June of each year. Nesting in construction-disturbed soils may be an “ecological trap” in that eggs or hatchlings will be killed in some nests when run over by heavy equipment or damaged by earthmoving. Eggs are laid from late May to early July (mostly in June), and hatchlings either leave the nest in August-September, or overwinter in the nest and emerge the following spring. Thus nesting and incubation of this species and other turtles occur with the construction window.

Wood turtle (*Glyptemys insculpta*; special concern and SGCN). The wood turtle is closely associated with perennial streams and rivers. Wood turtles overwinter in particular microhabitat features of stream channels (e.g., snags, deep pools, mammal burrows in banks) and spend much of the warm months in the riparian areas foraging. Wood turtles lay eggs in nests in the soil in approximately June and the eggs incubate in the soil until hatching and hatchling emergence in September-October. Adult wood turtles are vulnerable to injury and mortality from farm equipment and motor vehicles (Saumure et al. 2007) (and by inference construction equipment). Wood turtles may nest in recently disturbed soils, much as do snapping turtles (see above), thus eggs and hatchlings may be killed during construction or maintenance of the pipeline.

Sedimentation and scouring of stream channels potentially has a long-term impact on critical features of wood turtle habitats. Clearing of forest within a few hundred meters of streams may provide nesting sites and foraging habitats. Heavy equipment use in late spring and summer is likely to injure and kill wood turtle adults, juveniles, and eggs. Turtles are adapted to low annual mortality in the adult life

CO42-79      General impacts on general wildlife are discussed in section 4.6.1. See the response to comment FA4-32.



# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-79 cont'd	stage, and even small increases in adult mortality can cause population declines. It is unlikely that the potential benefits to wood turtles of the creation of open areas and disturbed well-drained soil would outweigh the negative effects of damaged stream channels and equipment-caused mortality.
CO42-80	<p>Snakes</p> <p>Three SGCN snakes occur in association with wetlands and range through part or all of the pipeline area (Gibbs et al. 2007). The vulnerabilities of these three species to human activities such as the impacts of pipeline construction and operation are poorly known.</p> <p>Eastern ribbon snake (<i>Thamnophis sauritus</i>; SGCN). This species occurs in the pipeline area in Broome and southwestern Delaware counties (Gibbs et al. 2007). Ribbons snakes are closely associated with ponds, marshes, and other kinds of wetlands, as well as upland habitats bordering ponds and wetlands (Gibbs et al. 2007).</p> <p>Eastern racer or black racer (<i>Coluber constrictor</i>; SGCN). The black racer distribution includes a majority of Schoharie County (Gibbs et al. 2007) and it may be present in the pipeline area. Although this is principally a species of upland habitats that are not densely forested, it also uses marsh edges (Gibbs et al. 2007).</p> <p>Smooth green snake (<i>Liophorophis vernalis</i>; SGCN). The habitats of this snake are mainly wet and dry grasslands and it occurs throughout the pipeline area (Gibbs et al. 2007).</p>
CO42-81	<p>Salamanders</p> <p>Salamanders in general are very vulnerable to impacts of human activities. Six species of salamanders are listed as SGCN in New York and range into the pipeline area. All six have aquatic larvae that live in streams, although the adults are variously aquatic, semi-aquatic, or principally terrestrial.</p> <p>Jefferson salamander (<i>Ambystoma jeffersonianum</i>; SC, SGCN). The Jefferson salamander spawns, and its larvae develop, in forested vernal pools (intermittent woodland pools, sensu Kiviat and Stevens 2001). Outside of the late winter or early spring spawning season, adults live in the surrounding upland forest where they spend most of their time burrowing in the forest floor and soil, or beneath cover objects such as logs and rocks. The breeding pools are generally small isolated pools that hold water from approximately late fall into mid-summer. These pools are often drained, filled, or dredged for agriculture, mosquito control, landscaping, development, or waste disposal. Calhoun et al. (2005) recommended no disturbance in the pool depression itself, no construction in the pool envelope extending 30 m outward from the maximum high water edge of the pool, and development of no more than 25% of the critical habitat between 30 and 230 m outside the pool. Many pools are not visible on aerial photographs or satellite imagery, and many are not shown on the National Wetland Inventory maps. Forested vernal pools need to be located and mapped within at least 230 m of the proposed pipeline alignment so they and their critical habitat can be protected. The "leaf pack" or forest litter layer on the bottom of the pool apparently provides the food for the macroinvertebrates that form much of the</p>

CO42-80 General impacts on general wildlife are discussed in section 4.6.1. See the response to comment FA4-32.

CO42-81 General impacts on general wildlife, including salamanders, and fisheries are discussed in section 4.6. See the responses to comments FA4-32 and FA4-35. Discussion of the hellbender has been added to section 4.7 of the EIS.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

S-619

CO42-81 cont'd	<p>Jefferson salamander's food, and sedimentation into the pools is probably adverse to this invertebrate assemblage and may constitute a long-term impact.</p> <p>Blue-spotted salamander (<i>Ambystoma laterale</i>; SC, SGCN). The blue-spotted salamander has a life history and habitat affinities similar to that of the Jefferson salamander (see above; Gibbs et al. 2007). Blue-spotted salamanders, at least in some regions, breed in flooded swamps rather than in forested vernal pools (Klemens 1993). Management recommendations are similar to those for Jefferson salamander (Calhoun et al. 2005).</p> <p>Northern red salamander (<i>Pseudotriton ruber</i>; SGCN). This species is found in and near streams, springs, ponds, and wetlands as well as in the adjoining forests (Gibbs et al. 2007). The geographic range of the red salamander may barely extend into the pipeline area on the Delaware-Otsego county border (Gibbs et al. 2007).</p> <p>Four-toed salamander (<i>Hemidactylium scutatum</i>; SGCN). Four-toed salamanders occur in moist forests near wetlands as well as in seeps, forested vernal pools, bogs, and swamps, and are often associated with moss mats (<i>Sphagnum</i> and other mosses; Gibbs et al. 2007). This species is secretive and often hard to find.</p> <p>Long-tailed salamander (<i>Eurycea longicauda</i>; SC, SGCN). This salamander has a restricted distribution in New York that includes Broome County and the western end of Delaware County. Long-tailed salamander adults spend much of their time close to small streams in forests; eggs are laid and larvae develop in the streams (Gibbs et al. 2007). Although the life history of this species is poorly known, it is expected to be vulnerable to physical and chemical changes in the headwater streams and moist riparian habitats where it occurs.</p> <p>Hellbender (<i>Cryptobranchus alleganiensis</i>; SC, SGCN). The hellbender is a large, fully-aquatic stream salamander. Hellbenders require cool, flowing, well-oxygenated water with little or no sedimentation, large flat rocks in the stream bed for adult shelter, and a deep gravel substrate for larvae (Gibbs et al. 2007). Sedimentation from pipeline construction would lower dissolved oxygen levels in streams in the short term, and may fill interstices of streambed rocks and gravel in the long term. The pipeline crossings themselves may damage habitats; although these may be small areas, it isn't known if they are critical for the hellbender. Although the hellbender is apparently extirpated, or nearly so, from the upper Susquehanna River system in New York, it is planned to reintroduce hellbenders headstarted from Pennsylvania eggs in the river near Oneonta, thus increased sediment and removal of riparian forest associated with the proposed pipeline could be a threat to habitat quality for restoration of this species (Peter J. Petokas, Lycoming College, personal communication).</p>
CO42-82	<p>Fishes</p> <p>Five species of fish are SGCN and may occur in the general area of the proposed pipeline (see range maps in Smith [1985]). These are the American eel (<i>Anguilla rostrata</i>), brook trout (<i>Salvelinus fontinalis</i>, heritage strains), blackchin shiner (<i>Notropis heterodon</i>), comely shiner (<i>Notropis amoemus</i>), and swallowtail shiner (<i>Notropis procne</i>).</p>

CO42-82

General impacts on fisheries (including trout) are discussed in section 4.6.2 of the EIS. Impacts on stream habitats would be avoided or minimized through the use of trenchless or dry crossing methods. As described in section 4.6.2.3 of the EIS, Constitution would attempt to capture and relocate fish that may be in the sections to be dewatered for dry crossings. Discussion of the American eel has been added to section 4.7 of the EIS.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-82  
cont'd

Brook trout occur widely in the project area, especially in smaller streams. There are populations of wild brook trout (i.e., non-stocked trout that are reproducing in the wild) in the area. According to Chris Van Maaren (DEC, personal communication), "heritage" brook trout (trout that are believed to be of precolumbian genotype[s]) had until recently been found in Tunis Lake, Delaware County, within about 40 km of the proposed pipeline. This Tunis Lake strain is being preserved in two ponds in southern Delaware County. Modern genetic analysis, to determine heritage status, has not been conducted on the small headwater brook trout populations in Delaware County that will be crossed by the pipeline construction.

The brook trout is a coolwater fish that thrives within a narrow range of environmental conditions, and is a very important sport fish. In a southern Ontario study, brook trout spawned near headwaters where dissolved oxygen (DO) was high, the substrate was gravelly, and there was groundwater seepage (Witzel and Macrimmon 1983). However, in Pennsylvania, groundwater discharge was not associated with brook trout nest sites (Curry and Noakes 1995). Such variation in habitat affinities may make it difficult to accurately predict impacts of pipeline construction. Groundwater input and shading by riparian vegetation are important to maintain cool water habitat in small streams (McRae and Edwards 1994). Brook trout will be stressed by climate warming (Meisner 2011). Turbidity interferes with the ability of brook trout to forage successfully (Sweka and Hartman 2001). Sediment input from pipeline crossings would probably also reduce DO and fill interstices in the stream bottom, affecting spawning habitat. A small experimental addition of sand to a southern Michigan stream resulted in a large decrease in the brook trout population and its food organisms (Alexander and Hansen 2011). Sedimentation would probably cause a long-term degradation of spawning habitat. Removal of riparian vegetation would increase water temperature and potentially affect the dead plant material (detritus) entering the stream which could alter the stream food web and adversely affect the insects trout eat. Brook trout were found to move widely up and down stream (Gowan and Fausch 1996), thus pipeline construction across streams potentially affects this species through long segments of stream. Fragmentation of stream systems by barriers can cause extinction of brook trout populations (Letcher et al. 2007); a stream need not be completely blocked (e.g., by a dam) to create a barrier to fish movement. Given the narrow environmental tolerances of brook trout, and their sensitivity to sedimentation, warming, and reduced DO, it is very likely that pipeline construction at crossings and near streams would adversely affect brook trout and their fishery. The occurrence of brook trout, and potentially of heritage brook trout, in streams that would be approached or crossed by the pipeline, needs to be addressed more thoroughly in the environmental assessment for the Constitution Pipeline.

American eel (SGCN and candidate for federal listing) occurs in the Delaware River system, tributaries of which would be crossed by the pipeline. This species could be affected by pipeline construction.

It is important to not create barriers to the movements of fish, hellbenders, mussels, and other fully aquatic animals up and down stream. Temporary barriers during pipeline construction might not interfere seriously with animal movement unless individuals are present during reproductive migrations. However, there is some potential for pipeline crossing installation, or landslides from pipeline construction on steep slopes, to alter a streambed such that animal passage is made more difficult on a long-term basis.

Increased sediment load from disturbances such as pipeline construction have a number of short-term physiological, behavioral, and other impacts on fishes, depending on the type of sediment, fish species,

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont’d)

S-621

CO42-82 cont'd	and other factors (Lévesque and Dubé 2007). Some of these effects, including gill damage (Lévesque and Dubé 2007) are likely to affect fishes in the long term by reducing health and fitness. Inasmuch as the DEC water quality criteria require no substantial visible contrast to natural conditions, and because increased turbidity (sedimentation) from disturbance of streambeds or of upland soils near streams can cause short-term and probably long-term harm to fishes (and other organisms discussed in this report), we are concerned about the ability of the Constitution Pipeline to meet the water quality criteria and not cause adverse impacts to SGCN and other aquatic (and wetland) species.
CO42-83	<p>Pearly Mussels</p> <p>Ten species of pearly mussels or freshwater mussels (Unionoidea) occur in the pipeline area (Strayer and Jirka 1997), three of which are SGCN (<i>Alasmidonta marginata</i>, <i>Alasmidonta varicosa</i>, <i>Lasmigona subviridis</i>). Pearly mussels in general are one of the most endangered groups of organisms in the U.S. (Stein et al. 2000), and are sensitive to flow changes, sedimentation, chemical pollution, and other human-caused changes to streams. Sedimentation is often especially harmful to mussels (Biber 2002). Although sedimentation and nutrient enrichment have often been cited as adverse to mussels, there are examples of rich mussel assemblages in streams in agricultural landscapes that are subject to both factors (Strayer and Jirka 1997). Given that mussel populations have been harmed by sedimentation in at least some situations, and the historic loss of many species and populations of mussels in the eastern U.S. (although not necessarily in New York), caution is required in assessing the impacts of the proposed pipeline. In this context it may be noted that once extirpated from a stream, mussel populations tend to reestablish slowly (Strayer and Jirka 1997), that sedimentation can cause long-term impacts to streams, and that impacts may propagate long distances downstream</p> <p>The green floater (<i>Lasmigona subviridis</i>; state threatened) occurs in the Susquehanna River system (Strayer and Jirka 1997). It is sensitive to flooding and drought (Kipp et al. 2014), thus may be vulnerable to hydrological changes in streams during pipeline construction.</p> <p>The brook floater (<i>Alasmidonta varicosa</i>; state threatened) occurred historically in the upper Susquehanna River system. This mussel is most often associated with nutrient-poor streams (Strayer and Jirka 1997) thus may be sensitive to nutrient enrichment from disturbed soil or other sources.</p> <p>The elktote (<i>Alasmidonta marginata</i>; SGCN) occurs in the upper Susquehanna system (Strayer and Jirka 1997).</p> <p>The yellow lampmussel (<i>Lampsilis cariosa</i>), considered vulnerable by NYNHP, was recorded from two localities at or near the proposed pipeline (Conrad 2012).</p>
CO42-84	<p>Dragonflies</p> <p>Several stream-breeding SGCN gomphid dragonflies are known from streams or rivers in the region and could occur in the pipeline area. These SGCN gomphids include rapids clubtail (<i>Gomphus quadricolor</i>), spine-crowned clubtail (<i>Gomphus abbreviatus</i>), extra-striped snaketail (<i>Ophiogomphus anomalus</i>) and brook snaketail (<i>Ophiogomphus aspersus</i>) (Erin White, New York Natural Heritage Program, personal</p>

CO42-83

Potential impacts on freshwater mussels are discussed in sections 4.6 and 4.7 of the EIS.

CO42-84

Section 4.6 of the EIS has been updated regarding potential impacts on aquatic macroinvertebrates.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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CO42-84  
cont'd

communication). Gomphidae larvae burrow in the substrate, and many (if not all) species are closely associated with substrates having a narrow range of particle size (Corbet 1999); these affinities suggest sensitivity to sedimentation. Gomphidae are relatively intolerant of pollution in general (E. White, personal communication). Sediment and other pollutants from pipeline construction may have adverse effects on rare dragonflies, and stream reaches downstream from crossings and locations where the pipeline is proposed to pass near streams should be surveyed for rare dragonflies (and rare damselflies).

### Other Invertebrates

The Appalachian tiger beetle (*Cicindela ancoisconensis*; SGCN) occurs in the Schoharie Creek, Esopus Creek, and Neversink River systems, and likely the Susquehanna River system (NYNHP 2013), and could be present at some of the proposed pipeline stream crossings. This species needs sparsely vegetated gravel or sand bars or sandy beaches in streams. Disturbance of such bars, alteration of flooding regimes, or possibly removal of riparian vegetation could eliminate Appalachian tiger beetle from a stream segment (NYNHP 2013a).

Rare species of mayflies (Ephemeroptera), stoneflies (Plecoptera), and other aquatic invertebrates may also occur in waters along the pipeline route. A pipeline crossing of a stream in the U.K. resulted in increased silt in the substrate below the crossing, which caused long-term changes in the species composition of the invertebrate assemblage that persisted for four years (Armitage and Gunn 1996). This illustrates the risk of long-term impacts to stream organisms from the proposed Constitution Pipeline.

CO42-85

### Vascular Plants

The applicant performed rare plant surveys (DEIS 2012 Rare Plant Survey Report) limited to northern monkshood (*Aconitum noveboracense*; federally listed), Hooker's orchid (*Platanthera hookeri*; state endangered), and a somewhat vague rare ground pine (presumably a lycophyte) reported by a landowner. Northern monkshood and Hooker's orchid are known from records at or near the proposed pipeline route. Only small portions of the pipeline corridor were identified to be surveyed for these rare plants, and some of those sites were not surveyed because landowner permissions were not granted. None of the three species was found in the applicant's surveys.

There are deficiencies in the survey approach. First, essentially only two species of rare plants were surveyed for. Surveys should address all relevant rare species that are known to occur in nearby portions of the state (e.g., entire counties) and for which potential habitat exists in the area of the proposed pipeline. The rare species to consider are those ranked as S1, S2, or S3 by the New York Natural Heritage Program, and possibly certain species that are regionally-rare, i.e., rare in the region of the state to be affected by the proposed project. Moreover, the entire proposed pipeline right-of-way should be surveyed, as well as nearby areas downslope and downstream that are likely to be affected by offsite impacts such as sedimentation and colluviation (accumulation of surficial materials downslope).

Goldenclub (golden club, *Orontium aquaticum*; state threatened) was reported in the pipeline area by Conrad (2012). Away from the Hudson River estuary in New York, goldenclub occurs in peatlands (bogs or poor fens) where it is known from few localities (Weldy et al. 2014); NYNHP recommends that

CO42-85

As discussed in section 4.7.3 of the EIS, Constitution developed a list of special-status species, including plants, based on consultation with federal and state agencies. We have included a recommendation in section 4.7 of the EIS that Constitution complete field studies for all applicable state-listed species, including rare plants, and develop mitigation measures in consultation with the state agencies prior to the start of construction.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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CO42-85 cont'd	<p>the hydrology and lack of disturbance in goldenclub sites be protected to conserve the species (NYNHP 2013c). Goldenclub would be vulnerable to pipeline crossings of wetlands or pollution from pipeline construction upslope which would introduce sediment and nutrients into the peatland and promote the overgrowth of taller vegetation.</p> <p>Southern twayblade (<i>Listera australis</i>; state endangered), an orchid, and pod grass (<i>Scheuchzeria palustris</i>) were both reported in the pipeline area (Conrad 2012).</p> <p>Threadfoot (<i>Podostemum ceratophyllum</i>; state threatened) has been documented in Delaware County (Weldy et al. 2014) and could occur in streams proposed to be crossed by the pipeline. Threadfoot typically grows on rocks in fast water of medium to large streams, and is considered vulnerable to sedimentation, nutrient pollution, and changes in flow regime (NYNHP 2013b). Threadfoot is hard to find because of the swiftwater large stream habitat.</p> <p>A number of other rare plants could occur along the route of the proposed pipeline. These include, for example, <i>Botrychium oneidense</i>, <i>Porteranthus stipulatus</i>, <i>Phlox maculata</i>, <i>Pinguicula vulgaris</i>, <i>Symphyotrichum boreale</i>, <i>Polemonium vanbruntiae</i>, <i>Lactuca hirsuta</i>, <i>Carex backii</i>, and <i>Cynoglossum virginianum</i> var. <i>boreale</i> (David Werier, Botanical and Ecological Consultant, Willseyville, NY). As mentioned above, these and other species need to be surveyed for along the pipeline route.</p>
CO42-86	<p>General Comments on Rare Species</p> <p>It appears from the DEIS and associated reports that consideration of rare species focused on certain federally and state-listed endangered and threatened species. Those are of great importance in environmental assessment of a proposed project. However, many other rare or vulnerable species should be addressed. These include all the animals on the state list of Species of Greatest Conservation Need (SGCN), and all the vascular plants and mosses ranked S1, S2, or S3 by the New York Natural Heritage Program (NYNHP). Conservation and protection of animals and plants on these lists is necessary to prevent additional species from declining to the extent that they need to be listed as endangered or threatened. Volume IV Appendix R of the DEIS (dated 2012) describes surveys for 10 rare plant species in Pennsylvania, 3 rare plants in New York, plus timber rattlesnake and Indiana bat; none of the other rare animals or plants mentioned here were surveyed for.</p> <p>The letter from Nicholas Conrad of NYNHP to John Zimmer of AECOM reporting records of rare species and communities from the NYNHP database is dated 16 October 2012 (Conrad 2012, Appendix 2). The letter recommends updating the inquiry to NYNHP if the project is still in development one year after the date of the letter. We have not found an updated letter. The NYNHP letter also states that NYNHP files were checked for the counties of Schoharie, Delaware, Otsego, and Chenango; Broome County is not mentioned although the principal proposed route transits Broome County. If the six routes for which data were requested from NYNHP do not include all of the currently proposed routes, data for those routes should be requested from NYNHP.</p>
CO42-87	<p>It is well known that National Wetland Inventory (NWI) maps, which were used to locate wetlands for the DEIS, omit some wetlands and map others conservatively (i.e., smaller than their actual size) (e.g., Hudsonia, unpublished habitat mapping data). Very small wetlands, such as seeps and forested vernal</p>

CO42-86

Constitution indicated that its consultations were ongoing with the New York Natural Heritage Program as reported in table 1.5-1 of the EIS. These additional contacts would be required as Constitution assesses and adopts route variations and new contractor yards. We have included a recommendation in section 4.7 of the EIS that Constitution complete field studies for all applicable state-listed species and develop mitigation measures in consultation with the state agencies prior to the start of construction. See the response to comment CO42-85 regarding the list of special-status species and our recommendation for additional consultations.

CO42-87

See the response to comment FA4-3.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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CO42-87 cont'd	<p>pools are commonly omitted because they do not all show on aerial photographs or satellite imagery. Thus the true amount of wetland is greater than that considered in the DEIS. Moreover, many small headwater streams, intermittent and even perennial, are almost certainly not considered in the DEIS for similar reasons. In order to accurately assess environmental impacts of the pipeline, the applicant must accurately map all wetlands and streams potentially affected by the pipeline, including wetlands and streams downslope from the proposed alignment.</p>
CO42-88	<p>New York State water quality standards (6NYCRR 700, 703.2) state that the criterion for acceptable turbidity is "No increase that will cause a substantial visible contrast to natural conditions." Construction sites commonly result in substantial visible turbidity, and this impact often continues long-term (e.g., months or longer) after completion of construction when heavy rainfall or snowmelt erodes scraped areas or backfill that has not been stabilized by sufficient growth of vegetation. Despite statements in environmental documents, sedimentation barriers at construction sites are most often inadequate to prevent substantial amounts of fine sediment from entering surface waters and wetlands. Sediment often passes around, beneath, over, and through barriers. Moreover, these barriers are often not properly cleaned up and removed after project completion, eventually resulting in barrier failure and movement of retained sediments into runoff waters. Steep slopes, of course, exacerbate these problems. The number of times "sediment" and "sedimentation" are mentioned in this report suggests the importance of sedimentation as a short and long-term adverse impact to streams, wetlands, and their biota, including many of the SGCN discussed here.</p> <p>It is incumbent upon the applicant to demonstrate that rare species will not be unacceptably harmed by long-term and short-term impacts of the proposed project. Any impact, such as sedimentation, that affects at least one reproductive season or one foraging season, must be considered a long-term impact because it has the potential to reduce fitness of a species in a wetland or stream reach. Some strong impacts can occur in a single day of heavy rain or a single pass of heavy equipment over a critical habitat such as a turtle nesting area. Any of the impacts discussed in this report could be repeated many times along the route of the Constitution Pipeline, not to mention the routes of many other gas pipelines and other land uses, thus these impacts must be considered cumulatively in their degradation of river systems such as the Susquehanna and Delaware, and their impacts on species that are affected at many locations.</p>
CO42-89	<p>The first concern in avoiding and reducing impacts on rare native species is to conduct adequate surveys using skilled personnel and appropriate techniques at and downstream of all locations where the pipeline is proposed to approach or cross water bodies and wetlands (including all alternate routes), and this needs to be done before permits are issued for the project to ensure that proper surveys are conducted and the project is modified accordingly. Surveys should also be conducted for rare species of upland habitats (these are not addressed in our report). The intent of the SGCN listing of species that have not been state or federally listed as endangered or threatened is to stimulate the inclusion of these species in environmental assessments as well as basic research so that additional species will not have to be listed as endangered or threatened. The DEC pursues "...conservation efforts aimed at preventing fish and wildlife populations from declining, reducing the potential for these species to be listed as endangered" (<a href="http://www.dec.ny.gov/animals/9406.html">http://www.dec.ny.gov/animals/9406.html</a>). We emphasize that, just because a species is not recorded in the databases of the NYNHP, DEC, USFWS, or another entity, does not mean that species is not present in the area of concern.</p>

CO42-88 See the response to comment CO42-63.

CO42-89 Constitution performed biological surveys in coordination with the relevant agencies and using qualified staff. See the response to comment FA4-3.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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CO42-90	Blasting in water bodies is expected to occur during construction (Desnoyers 2014). Shock waves from blasting could kill or injure aquatic animals such as hellbenders, brook trout, and invertebrates, and alter substrates to unknown distances from the blasting site (pipeline crossing). This is one of many impacts that increases the importance of knowing where species of concern are in the streams system (and wetlands) to be crossed or bordered by the pipeline.
CO42-91	<p>Rare Species Potentially Inhabiting Pipeline Rights-of-way after Construction</p> <p>Although the proposed pipeline would degrade the quality of wetlands, streams, and other habitats for many species of concern, there are also species that would colonize and potentially thrive in the disturbed soils and herbaceous vegetation of the pipeline right-of-way. A few of these are native species that are rare or habitat-limited, and of conservation concern.</p> <p>Long-lasting rain pools on a pipeline service road in New Jersey once supported the globally-rare but unlisted “feminine” clam shrimp (<i>Cyzicus [Caenestheriella] gynecia</i>; Schmidt and Kiviat 2007). Turtles, including the wood turtle (see above), nest in sparsely-vegetated, well-drained, friable, coarse-textured soil including on utility rights-of-way. A few rare plant species have been found at the edges of pipeline rights-of-way in Pennsylvania according to Kleinfelder biologists. We expect that the benefits of pipelines to such rare native species will usually be greatly outweighed by the detriments to many other species including those discussed above.</p>
CO42-92	<p>Invasive Species</p> <p>Nonnative weeds with the potential to colonize and spread widely in essentially native plant communities are considered “invasive” and can harm biodiversity by having adverse competitive effects on other plants (especially uncommon or rare species), or by replacing plants important to uncommon or rare native animals. Weeds readily disperse and colonize along linear disturbances such as roads, railroads, and pipelines. Where these spreading species encounter a vulnerable natural habitat they may spread off the infrastructure corridors and into more natural habitats such as streams. Streambanks and riparian corridors, because their soils and vegetation are disturbed by flooding and ice, are vulnerable to plant invasions. Examples of weeds that spread along both roads and streams are Japanese knotweed (<i>Polygonum cuspidatum</i>) and common reed (non-native <i>Phragmites</i>).</p> <p>The Constitution Pipeline would serve as a corridor for dispersal and spread of invasive weeds that are then likely to spread down stream corridors and into the edges of wetlands where they may affect the habitats of rare native wildlife or plants. Japanese knotweed propagules (vegetative fragments and seeds), for example, are likely to be picked up and spread along the pipeline right-of-way by construction and maintenance equipment including bulldozers and mowers. With considerable effort it may be possible to reduce the risk of the pipeline acting as a corridor for weeds (e.g., by washing equipment between water crossings), but this will not solve the problem completely. Stilwell (2012) recommended identifying existing occurrences of invasive species along the pipeline route, developing an invasive species management plan for the pipeline, cleaning equipment between work areas, and monitoring post-construction for invasive species.</p>

CO42-90	Constitution stated that it did not anticipate the need for blasting in waterbodies. However, the EIS contained our recommendation that prior to any in-stream blasting, that Constitution develop with the state agencies and file a site-specific blasting plan for the FERC’s review.
CO42-91	The comments indicating that some rare species may benefit from utility corridors are noted.
CO42-92	Invasive species and the didymo are discussed in section 4.5.4 of the EIS. See also the response to comment FA4-9.



# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

S-626

CO42-92 cont'd	<p>The invasive diatom “rock snot” or didymo (<i>Didymosphaenia geminata</i>) forms structures that cover rocks and other substrates in cool streams. Didymo can negatively affect benthic invertebrates (James et al. 2010) and can damage the quality of habitat and spawning for brook trout through restriction of hydraulic exchange (Bickel and Closs 2008). Didymo is easily spread from stream to stream on any object that is placed in the water of one stream and then in another stream without prolonged drying, and this includes construction equipment and wading boots. Didymo blooms have been confirmed in the Catskills including the Hudson and Delaware watersheds with rapid spread within watersheds especially after major stream restoration following Tropical Cyclones Irene and Lee in 2011 (George and Baldigo, United States Geological Survey unpublished report; D.C. Richardson et al., personal observation). Didymo and other aquatic invasives should be considered when transporting equipment between multiple streams and across watershed divides; it is important to use effective cleaning protocols to minimize any contamination (Root et al. 2012).</p> <p>In addition to didymo and weeds, construction equipment and personnel may unwittingly transport wildlife pathogens from one wetland or stream to another. The chytrid fungus (B.d., <i>Batrachochytrium dendrobatidis</i>) that can cause amphibian mortality, and several other pathogens of amphibians and reptiles, are of concern in this context.</p>
CO42-93	<p>Pipeline Maintenance</p> <p>Pipeline rights-of-way in New York are normally maintained in herbaceous vegetation by use of mowing or herbicides. Both management techniques are hazardous to plants and animals of conservation concern that use these linear meadows (e.g., nesting turtles, foraging birds, and potentially certain rare plants and butterflies on upland segments of rights-of-way, and many other animals and plants in wetland segments).</p> <p>Mowing also transports propagules of invasive weeds along rights-of-way. Pipeline service roads not only support the necessary maintenance vehicles but also attract all-terrain vehicles (ATVs) which drive through streams and wetlands, and cause noise disturbance to birds and other animals, as well as soil erosion.</p>
CO42-94	<p>Climate Change</p> <p>Climate change will exacerbate some of the pipeline impacts discussed here, although the exact results may be hard to predict. In the past century, annual precipitation has increased 10% nationwide, and this increase is mainly due to increases in the size of the larger storms (Karl and Knight 1998). This pattern of change has also occurred in the Adirondacks in the last 50 years (Jenkins 2010) and probably statewide. An increase in the numbers of intense storms generates increased flashiness of streamflow, and this undoubtedly interacts with the removal of forest cover, soil compaction, and other factors to increase scouring of streambeds. Increasing air and groundwater temperatures will also interact with the influences of reduced vegetation cover on streambanks and any increased turbidity to increase surface water temperatures. These kinds of synergistic impacts will probably adversely affect habitat quality for brook trout, hellbender, and other coolwater species. Increasing air temperatures may also interact with reduced forest cover in and around wetlands crossed by the pipeline to warm the wetland habitat. As</p>

CO42-93

In general, Constitution would only use herbicides for the treatment of invasive species, while mowing would be used to maintain the right-of-way. Constitution’s Plan, which is based on the FERC standard, would allow routine vegetation maintenance mowing over the full width of the permanent right-of-way in uplands no more frequently than every 3 years (see section VII.A.5 of the Plan, New York ECP (Volume II Appendix J) can also be found at [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14160901](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14160901)). However, to facilitate periodic corrosion/leak surveys, a corridor not exceeding 10 feet in width centered on the pipeline may be mowed at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. See the response to comment FA6-10 regarding long-term monitoring of the pipeline right-of-way for invasive species. We have updated section 4.6.1 of the EIS regarding vegetation maintenance which would not occur during the migratory bird nesting season (between April 15 and August 1) of any year unless specifically approved in writing by the responsible land management agency or the FWS. The control of unauthorized vehicle access to the right-of-way is discussed in section 4.8.3 of the EIS.

CO42-94

See the responses to comments CO1-5 and CO42-63 regarding flooding. Climate change is discussed in section 4.13.6.10 of the EIS.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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CO42-94 cont'd	Jenkins (2010) has suggested for the Adirondacks, but on a smaller scale, climate warming is likely to reduce the effectiveness of some wetlands (especially the bogs or peatlands) to act as refugia for species of plants and animals of northern affinities. The flora list in the 2012 Rare Plant Survey Report includes a number of wetland species of northern affinities, indicating that at least some of the wetlands along the pipeline route are currently supporting such "northern" plants.
CO42-95	<p>Shale Gas Development</p> <p>If high volume horizontal hydraulic fracturing (HVHMF) is permitted in New York, areas within 20 miles of the proposed Constitution Pipeline will be desirable drilling locations because of the ability to easily send gas to the pipeline. Therefore the Constitution Pipeline would be promoting shale gas development. HVHMF in Pennsylvania and other states has caused adverse impacts to streams via introduction of treated or untreated wastewater containing radioactive materials and high levels of salinity, and also via removal of water; forests have been affected by fragmentation for well pads, access roads, and pipelines (Kiviat 2013, Appendix 3). Air pollution, sedimentation, and heavy truck traffic are also expected to affect sensitive organisms.</p> <p>Water extraction and water pollution in streams and wetlands related to HVHMF would be cumulative to many of the pipeline impacts we discuss above. Because HVHMF installations have an expected life of 30-40 years, their impacts would be long-term impacts. HVHMF impacts interacting with other large scale anthropogenic impacts, including agriculture, land development, forestry, and climate change may make species with small geographic ranges substantially overlapping the Marcellus and Utica shale plays vulnerable to extinction (Gillen and Kiviat 2012, Appendix 4). Stilwell (2012) recommended considering the potential impacts of shale gas development in the environmental assessment for the Constitution Pipeline.</p>
CO42-96	<p>References Cited</p> <p>Alexander, G. R. and Hansen, E. A. (1986). Sand bed load in a brook trout stream. <i>North American Journal of Fisheries Management</i>, 6(1), 9-23.</p> <p>Armitage, P.D. and Gunn, R.J.M. (1996). Differential response of benthos to natural and anthropogenic disturbances in 3 lowland streams. <i>Internationale Revue der Gesamten Hydrobiologie</i>, 81(2), 161–181. (Cited in Lévesque and Dubé 2007; original not seen.)</p> <p>Beschta, R. L. (1978). Long-term patterns of sediment production following road construction and logging in the Oregon Coast Range. <i>Water Resources Research</i>, 14(6), 1011-1016.</p> <p>Beschta, R. L. (1979). Debris removal and its effects on sedimentation in an Oregon Coast Range stream. <i>Northwest Science</i>, 53(1), 71-77.</p> <p>Biber, E. 2002. The application of the Endangered Species Act to the protection of freshwater mussels: A case study. <i>Environmental Law</i> 32:91-173.</p>

CO42-95 See the responses to comments FA4-45 and LA1-4.

CO42-96 The commentor's comments are noted.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-96 cont'd	<p>Bickel, T. O., and G. P. Closs. 2008. Impact of <i>Didymosphenia geminata</i> on hyporheic conditions in trout redds: Reason for concern? <i>Marine and Freshwater Research</i> 59:1028-1033.</p> <p>Boulton, A. J., Findlay, S., Marmonier, P., Stanley, E. H., &amp; Valett, H. M. (1998). The functional significance of the hyporheic zone in streams and rivers. <i>Annual Review of Ecology and Systematics</i>, 29(1), 59-81.</p> <p>Calhoun, A. J., Miller, N. A. and Klemens, M. W. (2005). Conserving pool-breeding amphibians in human-dominated landscapes through local implementation of Best Development Practices. <i>Wetlands Ecology and Management</i>, 13(3), 291-304.</p> <p>Conrad, N. (New York Natural Heritage Program). 2012. Letter to John Zimmer (AECOM) dated 16 October. 3 p. (This letter is in Appendix 2.)</p> <p>Corbet, P.S. 1999. <i>Dragonflies: Behavior and ecology of Odonata</i>. Cornell University Press, Ithaca, New York. 829 p.</p> <p>Curry, R.A. and Noakes, D.L. (1995). Groundwater and the selection of spawning sites by brook trout (<i>Salvelinus fontinalis</i>). <i>Canadian Journal of Fisheries and Aquatic Sciences</i>, 52(8), 1733-1740.</p> <p>Desnoyers, P.J. (New York State Department of Environmental Conservation). 2014. Letter to K.D. Bose (Federal Energy Regulatory Commission) and J.M. McDonald (U.S. Army Corps of Engineers) dated 24 March. 3 p.</p> <p>Diffenbaugh, N. S., Pal, J. S., Trapp, R. J., &amp; Giorgi, F. (2005). Fine-scale processes regulate the response of extreme events to global climate change. <i>Proceedings of the National Academy of Sciences of the United States of America</i>, 102(44), 15774-15778.</p> <p>Diffenbaugh, N. S., Scherer, M., &amp; Trapp, R. J. (2013). Robust increases in severe thunderstorm environments in response to greenhouse forcing. <i>Proceedings of the National Academy of Sciences</i>, 110(41), 16361-16366.</p> <p>Dosskey, M. G., Vidon, P., Gurwick, N. P., Allan, C. J., Duval, T. P., &amp; Lowrance, R. (2010). The role of riparian vegetation in protecting and improving chemical water quality in streams. <i>JAWRA Journal of the American Water Resources Association</i>, 46(2), 261-277.</p> <p>Eiceman, G. A., Davani, B., &amp; Dodson, J. A. (1984). Discharge water from hydrostatic testing of natural gas pipelines as source of PAH loading into aquatic environments. <i>International journal of environmental analytical chemistry</i>, 19(1), 27-39.</p> <p>Freeman, M. C., &amp; Marcinek, P. A. (2006). Fish assemblage responses to water withdrawals and water supply reservoirs in Piedmont streams. <i>Environmental Management</i>, 38(3), 435-450.</p> <p>Gillen, J. and Kiviat, E. 2012. Hydraulic fracturing threats to species with restricted ranges in the eastern United States. <i>Environmental Practice</i> 14(4):320-331. (This paper is in Appendix 4.)</p>
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# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-96  
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## CO42 – Stop the Pipeline (cont'd)

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# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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### CO42 – Stop the Pipeline (cont'd)

CO42-96  
cont'd

List of Appendices (Exhibits)

Appendix 1. D. Stilwell letter.

Appendix 2. N. Conrad letter.

Appendix 3. Kiviat (2013) paper.

Appendix 4. Gillen and Kiviat (2012) paper.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)



### United States Department of the Interior

#### FISH AND WILDLIFE SERVICE

3817 Luker Road  
Cortland, NY 13045



CO42-96  
cont'd

October 5, 2012

Mr. Kevin Bowman  
Environmental Protection Specialist  
Federal Energy Regulatory Commission  
888 First Street NE  
Washington, DC 20426

Dear Mr. Bowman:

The U.S. Fish and Wildlife Service (Service) has reviewed the Notice of Intent (NOI) to Prepare an Environmental Impact Statement (EIS) for the Planned Constitution Pipeline Project, Request for Comments on Environmental Issues, and Notice of Public Scoping Meetings, Federal Energy Regulatory Commission (FERC) Docket No. PF12-9-000, dated September 7, 2012. The applicant, Constitution Pipeline Company, LLC, proposes to construct a new 30-inch natural gas pipeline, approximately 120.6 miles in length, from Susquehanna County, Pennsylvania, to the existing Tennessee Gas Pipeline in Schoharie County, New York. The purpose of the new pipeline project is to transport natural gas obtained from Marcellus shale reserves in Pennsylvania to markets in New York and beyond.

This is the report submitted by the Service and the Department of the Interior pursuant to, and in accordance with, provisions of the National Environmental Policy Act (42 U.S.C. 4321 et seq.), Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended; 16 U.S.C. 668-668d), and the Migratory Bird Treaty Act (MBTA) (40 Stat. 755; 16 U.S.C. 703-712). We may provide additional comments on this project under the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) or other legislation, as applicable.

The proposed project involves the construction of approximately 120 miles of new pipeline, four new meter and regulation stations, a new compressor station, and various infrastructure needed to support the pipeline. Public meetings to introduce the project, answer questions, and receive feedback were held in multiple locations in the project area in July and September 2012. As a result of those meetings, the applicant is reviewing and adjusting the project design and developing a new pipeline alternative, including a portion which would roughly follow the Interstate 88 highway corridor (Alternative M).

At full capacity the pipeline could transport up to 650,000 dekatherms of natural gas per day. Project documents indicate that the full capacity of the pipeline is currently under contract. However, it is not yet clear where the demand is for the gas that is being extracted in Pennsylvania. Nor, has it been explained how the existing pipeline infrastructure fails to provide adequate service. We are aware of several proposed and existing gas pipeline projects which

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# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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CO42-96  
cont'd

deliver natural gas from Pennsylvania to New York (Tennessee Gas 300, Stage Coach to Millennium, Texas Eastern). The FERC should require a more thorough review of these projects as alternatives for delivering gas to southeast New York. Adequate information on project purpose and need should be provided in the EIS.

According to project documents, construction of the pipeline could disturb more than 1,500 acres of land with approximately 700 acres or more being permanently retained for the operation of the project. While several resource categories, such as vegetation and wildlife, threatened and endangered species, and aquatic resources are listed in the NOI, there are no details on what studies would be required to evaluate the proposed project's effects on these resources. The NOI mentions that the project will have potential effects on listed and sensitive species, floodplains, and forests. Importantly, the NOI also includes the evaluation of alternatives as an issue for review.

We recommend a thorough analysis of environmental impacts for all viable alternatives, including upgrades to existing pipeline facilities. If upgraded equipment is capable of providing the service capacity proposed by the Constitution project, then the environmental impacts associated with its construction, operation, and maintenance can be avoided. If it is determined that a new pipeline facility is warranted, we recommend FERC consider the benefits of co-locating it with existing infrastructure, such as highway rights-of-way and utility corridors. This will reduce direct and indirect impacts to wildlife habitat, habitat fragmentation, and human disturbance in natural areas. Regardless of the alternatives reviewed, all should be studied in the same manner so that equal comparison of potential impacts to resources can be made.

Evaluation of aquatic resources is an important issue for projects such as this, and should include both a review of existing information and field collection of data. Water quality information about aquatic habitat is often lacking in environmental reports. We suggest that multiple agencies, such as the New York State Department of Environmental Conservation (NYSDEC), U.S. Environmental Protection Agency, Susquehanna River Basin Commission, and others be contacted to obtain as much existing data as possible. In addition, for those areas where disturbance will occur to aquatic habitat, water quality data should be collected so that potential impacts can be determined, and also to serve as baseline data to compare with post construction conditions should unexpected adverse impacts occur. Data on water quality parameters such as temperature, pH, conductivity, dissolved oxygen, and nutrient levels (e.g., phosphorus, nitrogen) should be collected.

We recommend coordination with the NYSDEC for information on sensitive aquatic species such as the hellbender (*Cryptobranchus alleganiensis*) and freshwater mussels which are known to occur in the Susquehanna River basin. These species may be adversely affected by changes in water quality or habitat disturbance. Surveys may be needed in locations of pipeline crossings of the river or its tributaries.

Wetland studies should include not only a physical description of the habitat but also what fish and wildlife are supported by each area. Evidence of animal use should be documented and a list of species expected to use the wetlands should also be developed. Construction impacts on these areas should be considered, including soil erosion and compaction by equipment, introduction of invasive plant species such as purple loosestrife (*Lythrum salicaria*) and common reed (*Phragmites* sp.), changes to drainage patterns, and the potential for spills of petroleum products. Measures to avoid and minimize these potential impacts should be provided, with special consideration of sensitive aquatic habitat. For example, we recommend the use of horizontal

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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CO42-96  
cont'd

directional drilling (HDD) to cross under aquatic habitat where feasible. Using HDD can be a means of avoiding and minimizing temporary and permanent impacts to these aquatic habitats. The assessment of wetland impacts should include the potential for indirect impacts, such as altering wetland hydrology on sloped areas. Where surface disturbance is expected, wetland contours should be surveyed to aid in restoration efforts.

For each alternative, we recommend that wildlife habitat be adequately mapped so that impacts to the various cover types can be assessed. This mapping effort can be done in conjunction with other field studies, such as wetland delineations. A more detailed habitat assessment may be requested if listed species or species of concern potentially occur in the project area.

The FERC will be involved with authorizing the proposed project. As you are aware, Federal agencies have responsibilities under Section 7(a)(2) of the ESA to consult with the Service regarding projects that may adversely affect federally listed species or designated "critical habitat," and confer with the Service regarding projects that may adversely affect federally proposed species or proposed "critical habitat." Therefore, the project's environmental documents should describe the project area, known listed species and critical habitat in or near the project site, and whether there will be effects to these resources from the proposed action.

Several federal and State listed species may occur in the project area. Previous correspondence from the Service's Pennsylvania Field Office dated May 29, 2012, revealed that the project is within the range of the Indiana bat (*Myotis sodalis*), a federally listed endangered species. It was requested that the amount of suitable habitat for this species within the project area be provided to determine the necessary survey effort. To date, that information has not yet been provided and, therefore, additional coordination will be required with the Service to determine survey protocols. For federally listed species found in New York, we recommended in a letter dated June 7, 2012, that information from our website\* be reviewed. We also indicated that the status of three bat species, Eastern small-footed bat (*Myotis leibii*), northern long-eared bat (*Myotis septentrionalis*), and little brown bat (*Myotis lucifugus*) was being reviewed for future ESA protection. Accordingly, conservation measures may include conducting surveys to locate maternity colonies along the proposed alternatives. Additional coordination with the Service would be needed to determine appropriate survey protocols.

We note that preliminary alternatives are proposed to cross many tracts of forest, some large in size. The fragmentation of forests by utilities, roads, and other development results in the direct loss of habitat and can reduce habitat quality, particularly for interior species such as black bear (*Ursus americanus*), northern goshawk (*Accipiter gentilis*), scarlet tanager (*Piranga olivacea*), and ovenbird (*Seiurus aurocapilla*) among many others. Studies have shown that an edge or corridor through a core forest can negatively affect the habitat for interior species out to 300 feet. Given this information, we recommend the analysis of impacts to intact blocks of forest habitat consider not only the direct but also the indirect effects of fragmentation. Fragmentation of forest not only results in habitat loss, but also can lead to reduction in habitat quality, isolation of individuals, reduced occupancy, reproduction, or survival in a particular species.

In our May 29, 2012, letter, we indicated that FERC should consider the effects of the project on migratory birds as indicated by the MBTA and the requirements of Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds. Construction of the project would likely encompass the nesting season of migratory birds. Therefore, data on breeding birds should be obtained for the project area. We request that documents which identify ways to limit project impacts to migratory birds and their habitats be provided prior to FERC approval. In

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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cont'd

In addition, FERC should coordinate with our office to develop conservation measures to benefit migratory birds, if appropriate.

We note that the bald eagle (*Haliaeetus leucocephalus*) is known to occur along the Susquehanna River and nearby areas. This species is protected by the BGEPA and is listed as threatened by the State of New York. Bald eagles have been known to breed in the area and, therefore, disturbance to nesting birds from construction activities is possible. If appropriate, we recommend that surveys for this species be coordinated with the Service.


Movement of construction equipment and soil disturbance can increase the likelihood that invasive plant species will become established in the project area or nearby areas. Invasive plants and animals can be destructive to native biotic populations and are often spread during construction projects. We recommend that the EIS document existing locations of invasive plants, as defined by the NYSDEC, along the proposed pipeline corridors. This information will aid in the development of an invasive species management plan prior to project approval. The EIS should identify best management practices and measures to preclude the spread of invasive species either into or out of the project site during construction. This would include the cleaning of equipment prior to moving between work areas. Monitoring post construction conditions can also serve as a way to ensure that no invasive plants become established.

A cumulative impact analysis of existing pipelines, transmission corridors, roads, and other development should be reviewed to determine the extent of previous impacts to fish and wildlife. It should also include the project that is currently proposed as well as those that are reasonably foreseen in the future. Consideration should be given to future Marcellus shale gas drilling and additional natural gas pipelines and infrastructure which may be required. This information should be provided and discussed in the EIS. While we understand that future development is difficult to predict, some information from Marcellus shale drilling in Pennsylvania may provide insight.

In summary, we recommend FERC and the applicant provide a rigorous environmental review of the Constitution Pipeline Project prior to project approval. Furthermore, the information gathered during this process should inform the project design and lead to measures which avoid and minimize impacts to important resources such as aquatic habitat, listed species, area sensitive species, migratory birds, and native plant communities. The applicant should closely review alternatives available to avoid and minimize impacts to natural resources and provide conceptual mitigation measures for those impacts which cannot be avoided. Project approval should only be considered after this information has been provided to the FERC.

We expect the Service's Pennsylvania and New York Field Offices to stay involved with the project and EIS review and welcome the opportunity to discuss these comments or aspects of the project with you. We hope these comments are useful in your project evaluation. Please contact Tim Sullivan at 607-753-9334 if there are any questions regarding this letter.

Sincerely,

  
David A. Stilwell  
Field Supervisor

**COMPANIES AND ORGANIZATIONS**

**CO42 – Stop the Pipeline (cont’d)**

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cont'd

\*Additional information referred to above may be found on our website at:  
<http://www.fws.gov/northeast/nyfo/es/section7.htm>

cc: NYSDEC, Albany, NY (S. Tomasik)  
EPA, New York, NY (L. Knutson)  
USFWS, PAFO, State College, PA (J. Siani)

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
Division of Fish, Wildlife & Marine Resources  
New York Natural Heritage Program  
625 Broadway, 5<sup>th</sup> Floor, Albany, New York 12233-4757  
Phone: (518) 402-8935 • Fax: (518) 402-8925  
Website: [www.dec.ny.gov](http://www.dec.ny.gov)



Joe Martens  
Commissioner

CO42-96  
cont'd

October 16, 2012

John Zimmer  
AECOM  
95 State Road  
Sagamore Beach, MA 02562

Dear Mr. Zimmer:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to an Environmental Assessment for the Proposed Constitution Pipeline – Alternative Routes, areas as indicated on the maps you sent, located in the Counties of Schoharie, Delaware, Otsego and Chenango.

Enclosed is report for Alternate Routes M, P, and Q, and for Compressor Station Sites D, E, and F. No records were identified in the vicinity of Alternate Routes L, O, and R.

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities, which our database indicates occur, or may occur, on your site or in the immediate vicinity of your site. For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our databases. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental impact assessment.

The enclosed report may be included in documents that will be available to the public. However, any enclosed maps displaying locations of rare species are considered sensitive information, and are intended only for the internal use of the recipient; they should not be included in any document that will be made available to the public, without permission from the New York Natural Heritage Program.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at [www.dec.ny.gov/about/39381.html](http://www.dec.ny.gov/about/39381.html).

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

Sincerely,

Nicholas Conrad, Information Services  
NYS Department Environmental Conservation  
# 951

Enc.

cc: Reg. 4 and 7, Wildlife Mgr.

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# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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New York Natural Heritage Program



Report on State-Listed Animals

CO42-96  
cont'd

The following state-listed animals have been documented at your project site, or in its vicinity.

The following list includes animals that are listed by NYS as Endangered, Threatened, or Special Concern; and/or that are federally listed or are candidates for federal listing. The list may also include significant natural communities that can serve as habitat for Endangered or Threatened animals, and/or other rare animals and rare plants found at these habitats.

For information about potential impacts of your project on these populations, how to avoid, minimize, or mitigate any impacts, and any permit considerations, contact the Wildlife Manager or the Fisheries Manager at the NYSDEC Regional Office for the region where the project is located. A listing of Regional Offices is at <http://www.dec.ny.gov/about/558.html>.

The following species and habitats have been documented at or near the project site, generally within 0.5 mile. Potential onsite and offsite impacts from the project may need to be addressed.

COMMON NAME	SCIENTIFIC NAME	NY STATE LISTING	FEDERAL LISTING
<b>Birds</b>			
<b>Bald Eagle</b> Breeding	<i>Haliaeetus leucocephalus</i>	Threatened	12969
<b>Animal Assemblages</b>			
<b>Bat Colony</b> Hibernaculum			10003
<b>Amphibians</b>			
<b>Hellbender</b>	<i>Cryptobranchus alleganiensis</i>	Special Concern	10990
<b>Freshwater Mussels</b>			
<b>Green Floater</b>	<i>Lasmigona subviridis</i>	Threatened	3823

This report only includes records from the NY Natural Heritage databases. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. This information should not be substituted for on-site surveys that may be required for environmental impact assessment.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the listed animals in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at [www.guides.nynhp.org](http://www.guides.nynhp.org), and from NYSDEC at <http://www.dec.ny.gov/animals/7494>.

Information about many of the rare plants and animals, and natural community types, in New York are available online in Natural Heritage's Conservation Guides at [www.guides.nynhp.org](http://www.guides.nynhp.org), and from NatureServe Explorer at <http://www.natureserve.org/explorer>.


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# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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New York Natural Heritage Program



Report on Rare Animals, Rare Plants, and  
Significant Natural Communities

CO42-96  
cont'd

The following rare plants, rare animals, and significant natural communities have been documented at your project site, or in its vicinity.

We recommend that potential onsite and offsite impacts of the proposed project on these species or communities be addressed as part of any environmental assessment or review conducted as part of the planning, permitting and approval process, such as reviews conducted under SEQ. Field surveys of the project site may be necessary to determine the status of a species at the site, particularly for sites that are currently undeveloped and may still contain suitable habitat. Final requirements of the project to avoid, minimize, or mitigate potential impacts are determined by the lead permitting agency or the government body approving the project.

The following animals, while not listed by New York State as Endangered or Threatened, are of conservation concern to the state, and are considered rare by the New York Natural Heritage Program.

COMMON NAME	SCIENTIFIC NAME	NY STATE LISTING	HERITAGE CONSERVATION STATUS
Freshwater Mussels			
Yellow Lampmussel	<i>Lampsilis cariosa</i>	Unlisted	Vulnerable in NYS
Schoharie Creek Old Central Bridge: A creekbed.			
Yellow Lampmussel	<i>Lampsilis cariosa</i>	Unlisted	Vulnerable in NYS
Susquehanna River Unadilla Otego and Oneonta: The mussels were observed in pools, runs, and riffles of a river with bottom substrates composed of cobble, gravel, sand, and silt. In some places the river is generally shallow, seldom more than three feet deep. The bottom is rocky with areas of sand and gravel between rocks and especially below riffles. The water is clear and cold with areas of ground water inflow evident. There are large expanses of cobble along the shore grading into grasses, dogwoods, silver maple, willows and elms. The edges of the river have mats of green algae that extend 1-6 feet into the water. Macrophytes, <i>Myriophyllum alterniflorum</i> and <i>Potamogeton pectinatus</i> , are growing in places. Crayfish, stoneflies, caddisflies and aquatic snails present.			

The following significant natural communities are considered significant from a statewide perspective by the NY Natural Heritage Program. They are either occurrences of a community type that is rare in the state, or a high quality example of a more common community type. By meeting specific, documented significance criteria, the NY Natural Heritage Program considers these community occurrences to have high ecological and conservation value.

COMMON NAME	SCIENTIFIC NAME	NY STATE LISTING	HERITAGE CONSERVATION STATUS
Wetland/Aquatic Communities			
Dwarf Shrub Bog		High Quality Occurrence of Uncommon Community Type	
Emmons Pond: This is a small to moderate-sized kettlehole bog in very good condition within a small, protected preserve and a greater landscape of mostly working forest and farmland.			

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# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-96

cont'd

The following plants are listed as Endangered or Threatened by New York State, and/or are considered rare by the New York Natural Heritage Program, and so are a vulnerable natural resource of conservation concern.

COMMON NAME	SCIENTIFIC NAME	NY STATE LISTING	HERITAGE CONSERVATION STATUS
<b>Vascular Plants</b>			
<b>Southern Twayblade</b>	<i>Listera australis</i>	Endangered	Critically Imperiled in NYS
: For more information, contact the New York Natural Heritage Program.			
11405			
<b>Golden Club</b>	<i>Orontium aquaticum</i>	Threatened	Imperiled in NYS
Schenevus Creek Bog: The plants are in a dwarf shrub bog.			
11404			
<b>Pod Grass</b>	<i>Scheuchzeria palustris</i>	Rare	Vulnerable in NYS
Schenevus Creek Bog: The plants are in a dwarf shrub bog.			
11403			

This report only includes records from the NY Natural Heritage databases. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. This information should not be substituted for on-site surveys that may be required for environmental impact assessment.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the rare animals and plants in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at [www.guides.nynhp.org](http://www.guides.nynhp.org), from NatureServe Explorer at <http://www.natureserve.org/explorer>, and from USDA's Plants Database at <http://plants.usda.gov/index.html> (for plants).

Information about many of the natural community types in New York, including identification, dominant and characteristic vegetation, distribution, conservation, and management, is available online in Natural Heritage's Conservation Guides at [www.guides.nynhp.org](http://www.guides.nynhp.org). For descriptions of all community types, go to <http://www.dec.ny.gov/animals/29384.html> and click on Draft Ecological Communities of New York State.




# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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New York Natural Heritage Program

Report on Historical Records of Rare Animals,  
Rare Plants, and Natural Communities

CO42-96  
cont'd

The following rare plants and rare animals have historical records at your project site, or in its vicinity.

The following rare plants and animals were documented in the vicinity of the project site at one time, but have not been documented there since 1979 or earlier, and/or there is uncertainty regarding their continued presence. There is no recent information on these plants and animals in the vicinity of the project site and their current status there is unknown. In most cases the precise location of the plant or animal in this vicinity at the time it was last documented is also unknown.

If suitable habitat for these plants or animals is present in the vicinity of the project site, it is possible that they may still occur there. We recommend that any field surveys to the site should include a search for these species, particularly for sites that are currently undeveloped and may still contain suitable habitat.

COMMON NAME	SCIENTIFIC NAME	NYS LISTING	HERITAGE CONSERVATION STATUS
Vascular Plants			
Northern Wild Comfrey	<i>Cynoglossum virginianum</i> var. <i>boreale</i>	Endangered	Critically Imperiled in NYS
1931-06-25: Central Bridge. Hills.			9742
Downy Lettuce	<i>Lactuca hirsuta</i>	Endangered	Critically Imperiled in NYS
1950-08-09: Colliersville.			8435
Hooker's Orchid	<i>Platanthera hookeri</i>	Endangered	Critically Imperiled in NYS
1931-06-25: Terrace Mountain. Woods.			4155

This report only includes records from the NY Natural Heritage databases. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. This information should not be substituted for on-site surveys that may be required for environmental impact assessment.

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### Risks to biodiversity from hydraulic fracturing for natural gas in the Marcellus and Utica shales

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High-volume horizontal hydraulic fracturing (HVHFF) for mining natural gas from the Marcellus and Utica shales is widespread in Pennsylvania and potentially throughout approximately 280,000 km<sup>2</sup> of the Appalachian Basin. Physical and chemical impacts of HVHFF include pollution by toxic synthetic chemicals, salt, and radionuclides, landscape fragmentation by wellpads, pipelines, and roads, alteration of stream and wetland hydrology, and increased truck traffic. Despite concerns about human health, there has been little study of the impacts on habitats and biota. Taxa and guilds potentially sensitive to HVHFF impacts include freshwater organisms (e.g., brook trout, freshwater mussels), fragmentation-sensitive biota (e.g., forest-interior breeding birds, forest orchids), and species with restricted geographic ranges (e.g., Wehrle's salamander, tongue-tied minnow). Impacts are potentially serious due to the rapid development of HVHFF over a large region.

**Keywords:** Appalachian Basin; biodiversity; forest fragmentation; hydraulic fracturing; salinization; shale gas

#### Introduction

High-volume horizontal hydraulic fracturing (HVHFF) occurs at increasing density across potentially 280,000 km<sup>2</sup> of the eastern United States underlain at depth by the natural gas-bearing Marcellus and Utica shales. These industrial installations and their edge effects alter as much as 80% of local landscapes.<sup>1</sup> The predicted intensity, speed, and extent of industrialization of the landscape have engendered concern about human health but little discussion of the effects on biodiversity;<sup>2–4</sup> although HVHFF has been identified as a global conservation issue.<sup>5</sup> Although the biota of the eastern United States is relatively well studied, many of the rare organisms potentially susceptible to industrial impacts are not. For example, the woodland salamanders (*Plethodon*) are diverse and sensitive to landscape and soil conditions; many species have only been described in recent decades; and as a group they are declining.<sup>6–8</sup> Although a direct survey of many taxa may be infeasible, indicator taxa may not effectively represent overall diversity.<sup>9</sup> In general, various taxa use different micro- and macrohabitats and have different conservation needs; one taxon

may not predict the occurrence or sensitivity to impacts of another taxon.<sup>10</sup> This review focuses on the physical and chemical impacts of HVHFF on habitats, taxa, and guilds, and suggests which organisms have particular sensitivities that may put them at risk.

#### The Marcellus–Utica region

Conservatively, 9.5% of the conterminous United States is underlain by gas shales;<sup>11</sup> Canada, southern South America, Europe, South Africa, North Africa, China, India, and Australia also have exploitable formations.<sup>12</sup> The most extensive resources in the eastern United States are the Marcellus and Utica shales, underlying the Appalachian Basin from approximately the Mohawk and Hudson rivers in New York, through extensive areas of Pennsylvania and Ohio, most of West Virginia, and into small parts of Maryland, Virginia, and Ontario (Fig. 1).<sup>13</sup> Much of the region is forested, with dominant trees that include oaks (*Quercus* spp.), hickories (*Carya* spp.), sugar maple (*Acer saccharum*), American beech (*Fagus grandifolia*), and yellow birch (*Betula allegheniensis*).<sup>14</sup> Elevations range

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Figure 1. Map of the Marcellus–Utica shale region. Reprinted with the permission of Cambridge University Press.<sup>8</sup>

from less than 100 m near the Hudson River to more than 1500 m in north-central Pennsylvania.

The Marcellus and Utica shales are organic-rich, marine shales deposited during the Middle Devonian and Middle Ordovician periods, respectively. The formations vary from exposed (in small areas) to overlain by 3 km or more of other bedrock strata, with the Utica underlying the Marcellus and extending farther west and southwest. Some of the organic matter is methane, the principal constituent of natural gas, tightly bound in microscopic pores.

**Hydraulic fracturing**

Horizontal drilling and hydraulic fracturing were developed in recent decades to mine gas from deep strata. In a typical installation, one to several wells are drilled from a single wellpad. Each well descends vertically 1.5 km or more to the target shale stratum, and then continues horizontally as much as 1.5 km. Fracturing fluid (water, chemicals, and sand) is forced under high pressure into the shale to open and prop spaces that let gas flow into the well.<sup>13</sup>

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After fracturing, the gas and a portion of the fracturing fluid ascend the well and are collected. The gas is cleaned, compressed, and piped via collector lines to transmission pipelines.

Each HVHFF installation constitutes a wellpad, an access road, storage areas for water, chemicals, sand, and wastewater, a compressor station, and a collector pipeline. Installations often require extensive cut-and-fill, and some are on steep slopes.<sup>15</sup> In Pennsylvania in 2008, half of the installations were in forests and used, on average, 3.56 ha, thereby affecting approximately 15 ha of forest per installation.<sup>1</sup> An estimated 60,000 new wells will be in place by 2030.<sup>16</sup> A well is fractured at intervals of several years during its projected 40- to 50-year life, and each wellpad may support several wells. Each fracturing episode, per well, uses  $4\text{--}12 \times 10^6$  L of water, which is usually trucked from a lake or river (the amount per episode may be as high as  $15\text{--}25 \times 10^9$  L).<sup>17</sup> The portion of water and chemicals that returns to the surface as wastewater has been estimated at 9–100%.<sup>18</sup> More than 600 synthetic chemicals are used in HVHFF, including methanol, naphthalene, xylene, acetic acid, ammonia, and #2 fuel oil,<sup>2</sup> but those used in any given well are unidentified. These chemicals constitute about 0.5% of the fracturing fluid; because of the large volume of fluids,  $1 \times 10^6$  L of chemicals may be injected with a portion returning to the surface.<sup>4,13</sup> The wastewater, either return water during the fracturing operation or produced water afterward,<sup>4</sup> also contains substances from the shale, especially sodium, chloride, bromide, arsenic, barium, other heavy metals, organic compounds, and radionuclides.<sup>13</sup> Wastewater is often stored in lined, open ponds near wellpads, apparently to concentrate it, then trucked to treatment plants (including municipal plants not designed to remove salinity or radionuclides, and discharging effluent that has sometimes led to high salinity or total dissolved solids in rivers).<sup>13,18</sup> Wastewater is also reused for fracturing, disposed of by deep injection, spread on roads for dust control, or concentrated by evaporation and buried.<sup>2,15,18</sup>

### Assessing biodiversity risk

#### Water and soil pollutants

Many spills or leaks of raw chemicals, fracturing fluids, or wastewater have been documented, involving volatile and gaseous organic chemicals, diesel fuel, surfactants, metals, sodium chloride, acidic wa-

ter, and other substances.<sup>2,3,19–21</sup> In one instance, the median chloride content of wastewater was  $56,900 \text{ mg L}^{-1}$ .<sup>18</sup> At a West Virginia site, wastewater with approximately  $4,000\text{--}14,000 \text{ mg L}^{-1}$  chloride was sprayed on ground and vegetation, killing trees and other plants.<sup>15</sup> Four northeastern amphibian species have been shown to be adversely affected by approximately  $50\text{--}1,000 \text{ mg L}^{-1}$  chloride, depending on the species and life stage,<sup>22</sup> suggesting that small amounts of HVHFF wastewater could render breeding habitats unsuitable. Many lichens,<sup>23–25</sup> liverworts,<sup>26</sup> sphagnum mosses,<sup>27–29</sup> conifers,<sup>30,31</sup> aquatic plants,<sup>32,33</sup> and bog plants<sup>34</sup> are also sensitive to salt; numerous streams are already salinized from road deicing.<sup>35</sup> Furthermore, lichens<sup>36–40</sup> and stoneworts<sup>41–43</sup> can be harmed by heavy metals. Wastewater ponds contain highly toxic synthetic chemicals<sup>2</sup> and could potentially be ecological traps for water birds, muskrat, turtles, frogs, and aquatic insects. Mixtures of these chemicals will have effects that cannot be predicted by knowledge of individual chemicals.<sup>3</sup>

Sediment pollution of streams and other habitats may be caused by heavy equipment on rural roads mobilizing mineral particles in runoff or airborne dust,<sup>13</sup> or by inadequate erosion control at HVHFF sites.<sup>21</sup> In an HVHFF region of Arkansas, stream turbidity was correlated with well density.<sup>3</sup> Suspended sediment additions to higher order streams could potentially harm benthic invertebrates and fish; native brook trout and freshwater mussels are among the most vulnerable taxa. Dust from roads can harm nearby plants and pollute streams.<sup>35</sup>

#### Forest loss and fragmentation

Loss of forest cover and change in the spatial pattern of cover are often confounded, but cause different responses.<sup>44</sup> Edge effects on forest biota range from 10 m for trees to as much as 500 m for certain birds.<sup>45</sup> Forest fragmentation, which affects dispersal, pollination, herbivory, and predation, is a major conservation concern in HVHFF landscapes;<sup>1,16,46</sup> 20% or more of the forest cover may be removed for the establishment of HVHFF installations, and more than 80% of the land may be affected if a 100-m edge effect is considered.<sup>1</sup> This loss and fragmentation of forest would result in the warming and drying of the remaining forest, with greater penetration by nonnative plants, songbird nest predators, and the brood-parasitic

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brown-headed cowbird (*Molothrus ater*). Several forest amphibians occur at lower abundances in forest within 25–35 m of clearcut edges,<sup>47</sup> and juvenile forest amphibians have trouble dispersing across open habitats.<sup>48,49</sup> At five conventional gas well sites in West Virginia, three salamander species were more abundant closer to the forest edge, but less so in the drier southwestern aspect than in the moister northeastern aspect; edge effect was offset by rock and coarse woody debris (CWD) microhabitats.<sup>50</sup> Organisms sensitive to forest fragmentation include lichens and bryophytes,<sup>51</sup> orchids,<sup>52</sup> other herbs,<sup>53</sup> the West Virginia white butterfly (*Pieris virginiensis*),<sup>54</sup> amphibians,<sup>54,55</sup> and birds.<sup>56–59</sup> Orchids are among the taxa most sensitive to habitat change in that many orchid species occur in small, isolated populations and depend on narrow ranges of soil moisture, organic matter, light, and nutrients; they also have complex obligate relationships with mycorrhizal fungi and pollinators.<sup>60</sup> In addition, drying of air and soils near forest edges can degrade habitat for certain grape ferns (*Botrychium*).<sup>61</sup>

Pennsylvania forests serve as habitat reserves for many species.<sup>46</sup> Forest fragmentation and loss threaten populations of several breeding birds of conservation concern in Pennsylvania and West Virginia, including wood thrush (*Hylocichla mustelina*), cerulean warbler (*Setophaga cerulea*), and summer tanager (*Piranga rubra*).<sup>62–64</sup> Concern has been raised about potential HVHFF impacts on breeding populations of area-sensitive forest interior songbirds, such as black-throated blue warbler (*Setophaga caerulescens*) and a wide-ranging forest raptor, the northern goshawk (*Accipiter gentilis*).<sup>1</sup> In a 5-year study of breeding birds at 469 sampling points in forest patches ranging from 0.1 to 3,000 ha in Maryland, Pennsylvania, West Virginia, and Virginia, the percentages of forest cover within 2 km and the forest patch area were significant habitat variables for 40 and 38 species, respectively, of 75 species studied; 26 birds were considered area sensitive.<sup>66</sup>

It may take 75–100 years, or more, for cleared forests to regenerate and mature. Forest floor species such as salamanders<sup>65</sup> and herbaceous plants<sup>66</sup> have limited dispersal ability and may take as many additional years to recolonize regrown forests.<sup>67</sup> The guild of forest herbs, often diverse and abundant in mature Appalachian forests, contains many species vulnerable to environmental changes.<sup>68</sup> Logging or

clearing reduces herb diversity, and the herb stratum may take several decades to recover. Herbivory by white-tailed deer (*Odocoileus virginianus*) is harmful to many forest herbs; it is possible that clearing for wellpads, roads, and pipelines may create a landscape that will support more deer and may subject forest herb populations to more intense grazing. One study reported that forests that are less than 70 years old supported fewer rare lichens and bryophytes than older forests;<sup>54</sup> this observation may pertain to young forests that develop following abandonment of HVHFF installations.

### Roads and pipelines

Roads act as corridors for the spread of nonnative weeds.<sup>35,68,69</sup> Nonnative or weedy native plants will colonize disturbed soils at roads,<sup>35,70</sup> wellpads, compressor stations, and pipelines, and spread from there into forests and other habitats. This has occurred at energy development sites in western North America.<sup>71</sup> Among possible nonnative weeds that could colonize eastern HVHFF sites are common reed (nonnative haplotype of *Phragmites australis*), stiltgrass (*Microstegium vimineum*), Japanese knotweed (*Polygonum cuspidatum*), spotted knapweed (*Centaurea stoebe*), mugwort (*Artemisia vulgaris*), angelica tree (*Aralia elata*), autumn-olive (*Elaeagnus umbellata*), tree-of-heaven (*Ailanthus altissima*), and empress tree (*Paulownia tomentosa*). These plants thrive on habitats resulting from cut-and-fill, and are colonizing recent disturbances from surface mining, roads, and gas pipelines in the Catskill Mountains and Hudson Highlands of New York and other eastern regions.<sup>72</sup> Common reed disperses along roads, and from there, into adjoining undisturbed habitats,<sup>73,74</sup> where it may adversely affect plant and animal assemblages. The combination of disturbed roadside habitat and salinization from deicing salts is favorable for common reed. Vegetation of pipeline rights-of-way is managed by mowing or spraying herbicide; runoff or spray drift may affect rare native plants in adjoining habitats.

Many forest songbirds avoid roads, trails, pipelines, and human activities.<sup>75</sup> In western Canada, territories of the ovenbird (*Seiurus aurocapillus*) straddled 3-m-wide cleared seismic exploration lines, but did not straddle 8-m-wide lines, leading to local population declines.<sup>75</sup> In another example, red-backed salamander (*Plethodon cinereus*) was less abundant near gravel roads in mature forests

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in Virginia; this influence of roads on red-backed salamander appeared to be due to dessication of soils.<sup>76</sup> Some access roads and pipelines cross wetlands and streams, potentially creating barriers to movement of water and organisms. It takes an estimated 6,800 truck trips to fracture a single well.<sup>77</sup> Many amphibians, reptiles, birds, and mammals are vulnerable to road mortality; in Ontario, numbers of dead frogs increased, and nearby breeding choruses decreased in intensity, in proportion to the amount of traffic on roads.<sup>78</sup>

### Hydrological alteration

Many organisms of streams, wetlands, and temporary ponds require certain patterns of water levels and flows through the year (the hydropattern).<sup>79</sup> Hydrological changes, including the withdrawal of surface waters, and increases in runoff caused by deforestation and impervious surfaces of wellpads and access roads, presumably affect the hydropatterns of streams,<sup>80</sup> floodplains, wetlands, intermittent pools (vernal pools), springs, seeps, shallow groundwater, and karst complexes. Withdrawals from lakes and rivers for fracturing wells might reduce minimum instream flows in the summer. Stream fishes, including brook trout (*Salvelinus fontinalis*), and aquatic invertebrates that must remain in water during summer, such as crayfishes and stoneflies, may be adversely affected by reduced summer flows.<sup>81</sup> Reduced flows may also decrease dissolved oxygen, increase deposition of fine sediment, and increase water temperatures, causing macroinvertebrate species richness to decrease and community composition to shift toward forms tolerant of these conditions.<sup>82</sup> Other species that could potentially be affected include freshwater mussels (Unionoidea), diverse in the Marcellus–Utica region, that are sensitive to hydrology, water quality, and siltation of rivers.<sup>83,84</sup> Hellbender (*Cryptobranchus alleganiensis*), a giant aquatic salamander, requires cool, well-oxygenated, swift streams and is also sensitive to siltation and pollution.<sup>85–87</sup>

In addition, withdrawal and disposal of water could potentially affect groundwater tables and flows, changing groundwater inputs to streams or wetlands. Impacts may be greater during droughts, or where there are competing uses of water, such as in agriculture.<sup>3,13</sup> At a threshold of 10–20% cover by impervious surfaces in a watershed, water quality and species diversity decrease in streams.<sup>88–90</sup>

in some HVHFF landscapes, wellpads and access roads cover more than 10%.<sup>1</sup> Because of the density of HVHFF infrastructure on the landscape, and other impacts from siltation and chemical pollution, there may be cumulative impacts to wetlands and streams. Reduction of forest cover in watersheds may also have long-lasting effects on stream biodiversity.<sup>91</sup>

### Noise

At HVHFF installations, diesel compressors run 24 h/day, and the noise can be heard from long distances.<sup>92</sup> Continuous loud noise from, for example, transportation networks, motorized recreation, and urban development can interfere with acoustic communication of frogs, birds, and mammals, and cause hearing loss, elevated stress hormone levels, and hypertension in various animals.<sup>92</sup> One study showed that gas compressor station noise in Alberta reduced ovenbird pairing success.<sup>93</sup> In piñon-juniper woodland of New Mexico, breeding bird species richness was greater, species composition different, and overall nest density similar near gas wellpads without compressors compared to wellpads with compressors, but daily nest survival was higher near pads with compressors due to less predation by western scrub jays (*Aphelocoma californica*).<sup>94</sup> In a comparison of breeding birds near wellpads with and without compressors in the boreal forest, total density and densities of one-third of the individual species were lower at the compressor sites.<sup>95</sup> Bats avoid continuous loud noise and it may impair foraging efficiency.<sup>96–100</sup>

### Light

Installations are brightly lit at night,<sup>20</sup> especially wellpads during drilling and fracturing and compressor stations continuously. Artificial night lighting variably affects different taxa; for example, adult moths and aquatic insects may be attracted and killed, whereas various species of bats may be harmed or benefited.<sup>96,101,102</sup> Night lighting potentially disrupts populations of stream insects, in turn affecting food webs and ecosystem function.<sup>103</sup> Mortality, reproduction, and foraging of many other animals are affected negatively or positively.<sup>101</sup> Polarized light pollution from artificial surfaces, especially smoother, darker surfaces including pavement, vehicles, and waste oil, creates another visual disturbance.<sup>104</sup> Animals that orient to polarized light, including many invertebrate and vertebrate

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taxa, may be killed or have their reproduction disrupted. This potential impact of HVHFF installations has not been studied.

### Air quality

Air emissions, including diesel exhaust from compressors and trucks, volatile organics from fracturing fluids, ground-level ozone resulting from their interaction, and road dust, affect air quality around HVHFF sites.<sup>109</sup> Diesel smoke contains mutagenic and carcinogenic polycyclic aromatic hydrocarbons (PAHs)<sup>106</sup> that could affect animal health. In a relevant study, nitrogen oxides from vehicles affected mosses within 50–100 m of roads in England;<sup>107</sup> trees were adversely affected within the same distances, but the haircap moss *Polytrichum commune* showed a decline in frequency with distance from heavily traveled roads.<sup>108</sup> It is possible that diesel exhaust at HVHFF sites could produce similar effects. Lichens are especially sensitive to sulfur dioxide and other air pollutants,<sup>36,39,109,110</sup> and are harmed by road dust, as are sphagnum mosses.<sup>111</sup>

### Range-restricted species

A species that has a large part of its geographic range in the Marcellus–Utica region may potentially be at risk of extinction from HVHFF impacts (especially in combination with other widespread environmental change). A recent study<sup>8</sup> analyzed 15 plants, butterflies, fish, amphibians, and mammals with geographic ranges overlapping the Marcellus–Utica region by 36–100% (Figs. 2 and 3). Although most of these species are considered sensitive to forest fragmentation, habitat alteration, or water quality degradation, lungless salamanders (Plethodontidae; eight species analyzed) seemed especially at risk. Many species of invertebrates, higher plants, and cryptogams whose ranges have not been mapped in detail may be quasi-endemic to the region.

Species with larger geographic ranges may nonetheless have important population components or seasonal habitats within the Marcellus–Utica region. The Virginia big-eared bat (*Corynorhinus townsendii virginianus*) occupies 15 limestone caves, 11 of which are in West Virginia.<sup>112</sup> Limestones are often highly porous to water pollution; therefore, cave species could potentially be at greater risk of being affected by HVHFF.

In each state, because of historic, political, social, and economic differences, and genetic differences within many species, environmental impacts

on, and management of, rare species differ. Therefore, a species that is restricted to the Marcellus–Utica region within one state could potentially be at higher risk. In Pennsylvania, all known populations of the green salamander (*Aneides aeneus*), and 73% of populations of the snow trillium (*Trillium nivale*), are in localities with a high probability of HVHFF.<sup>1</sup> In New York, bluebreast darter (*Etheostoma caeruleum*), spotted darter (*E. maculatum*), banded darter (*E. zonale*), and variegated darter (*E. variatum*) are apparently confined to the Marcellus region;<sup>113</sup> these stream fishes are likely to be sensitive to salt and sediment pollution.<sup>114,115</sup>

### Species potentially benefiting from HVHFF

Many native organisms use habitats created by construction or abandonment of industrial facilities, such as forest edges or bare soil. Some native bees and wasps dig nest burrows in bare soil, and reptiles often lay eggs in disturbed soils of road and railroad verges. Snakes, including timber rattlesnake (*Crotalus horridus*), are attracted by warm pavement in cooling weather. Several birds nest on bare or sparsely vegetated soil, including mallard (*Anas platyrhynchos*), common nighthawk (*Chordeiles minor*), killdeer (*Charadrius vociferus*), and spotted sandpiper (*Actitis macularia*), and many birds dust bathe on bare soils. White-tailed deer have been shown to be attracted to soils where HVHFF wastewater had been land-applied;<sup>15</sup> porcupine (*Erethizon dorsatum*)<sup>116</sup> and many butterflies<sup>117</sup> would also be attracted to salt. Metal-tolerant vascular plants and mosses could grow in these situations.<sup>118</sup> Postindustrial sites in England are important habitats for beetles, including rare species.<sup>119</sup>

Species of southern affinities would be attracted to wellpads and their peripheries due to solar warming. For example, water-filled wheel ruts and rain pools would serve as larval mosquito habitats; in Wyoming, there was a 75% increase in 5 years in potential mosquito larval habitats in ponds holding wastewater from coal bed gas drilling.<sup>120</sup> Access roads with numerous, long-lasting rain pools might support the globally rare feminine clam shrimp (*Cyzicus gynecia*).<sup>121</sup> It is possible that some grassland and shrubland species might colonize decommissioned facilities if they are extensive or adjoin other nonforested habitats. Most organisms able to colonize active or abandoned installations may be

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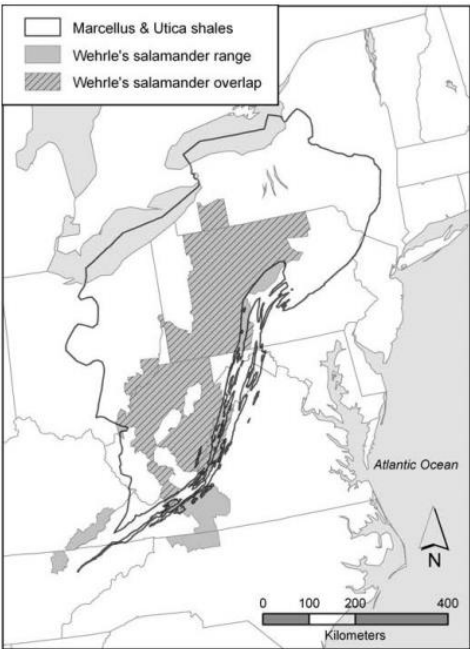
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**Figure 2.** Distribution of Wehrle's salamander (*Plethodon wehrlei*) in relation to the Marcellus–Utica shale region. Reprinted with the permission of Cambridge University Press.<sup>8</sup>

common species and ecological generalists. Rare or sensitive species that are small or require only small habitat patches (e.g., land snails, millipedes, certain insects) may persist in forest patches between wellpads, and some organisms might escape predators or competitors in fragments.

*Cumulative impacts*

In the Marcellus–Utica region, HVHHP constitutes landscape- and regional-scale activities and impacts.

Many thousands of wellpads will be distributed across the 280,000 km<sup>2</sup> region. Each wellpad will likely be drilled several times, and successful wells will be fractured multiple times during their 40- to 50-year life span.

Widespread environmental changes other than those produced by HVHHP also affect eastern biodiversity,<sup>6,12</sup> including coal mining, logging, agriculture, urban sprawl, accelerated climate change, acidification, eutrophication, chemical



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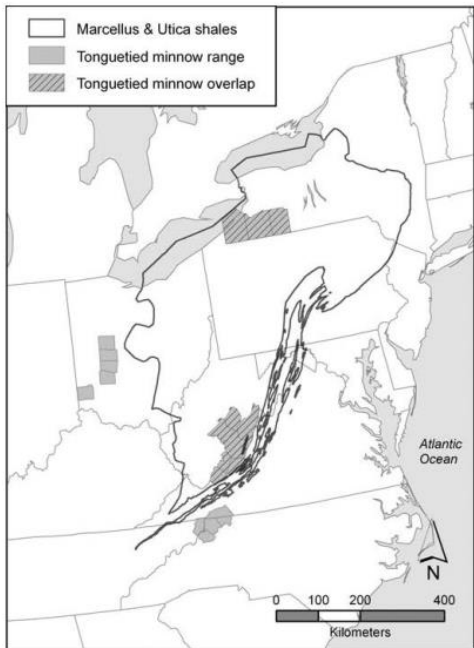
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**Figure 3.** Distribution of tongue-tied minnow (*Epiplatys lauriae*) in relation to the Marcellus–Utica shale region. Reprinted with the permission of Cambridge University Press.<sup>8</sup>

contamination, altered fire regimes, emerging pathogens and parasites, and nonnative species spread. For example, most tree species are not shifting latitudinal ranges to keep pace with climate warming, and the ranges of many species are shrinking.<sup>123</sup> Such large-scale changes could potentially interact synergistically with the HVHFF impacts on forest biota as they accumulate across space and time. One study suggested that the effects of HVHFF on stream water quality will accumulate

across watersheds.<sup>5</sup> In a meta-analysis of the effects of roads, power lines, and wind turbines on birds and mammals, bird populations were reduced as far as 1 km, and mammal populations were reduced as far as 5 km, from roads and infrastructure.<sup>124</sup> If this finding applies to the wellpads, gas compressors, and roads associated with HVHFF, the corresponding buffers around each installation needed to protect birds and mammals (3.1 km<sup>2</sup> and 78.5 km<sup>2</sup>) are larger than the current spacing units for well density

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in Pennsylvania (1–2.5 km<sup>2</sup>) and those projected for New York (2.6 km<sup>2</sup>).<sup>16</sup>

### Discussion and conclusions

Biodiversity impacts of HVHFF are similar to the impacts of many industries, although the chemical complexity and geographic extent are unusual. The major, long-term effects on biota likely to propagate through landscapes are habitat loss and fragmentation, chemical pollution, degradation of water quality, and hydrological alteration; other impacts, including noise, light, and air quality, may be more local and short-term. Biota vulnerable to HVHFF impacts include many native organisms that are important either for subsistence or in broader markets, such as medicinal plants (e.g., goldenseal (*Hydrastis canadensis*)),<sup>125</sup> edible fungi, brook trout and other sport fishes,<sup>1</sup> game birds and mammals (e.g., wood duck (*Aix sponsa*)), furbearers (American mink (*Mustela vison*), river otter (*Lontra canadensis*), common muskrat (*Ondatra zibethicus*)), and “watchable” wildlife (e.g., many forest-breeding birds). For example, studies suggest that HVHFF may affect trout habitats via water temperature increase, siltation, and heavy metals.<sup>126,127</sup>

Many of the biodiversity impacts of HVHFF might be reduced by zero-loss management of chemicals, wastewater, soil, and other pollutants, but this is a challenge considering the record of leaks, spills, fugitive emissions, and disposal. Water use and truck traffic can be reduced by reusing more wastewater, but similar amounts of pollutants will require disposal. If it eventually becomes possible to drill horizontally several kilometers, fewer wellpads would be needed, thus reducing fragmentation, and allowing more wells to be sited next to highways or on derelict lands, such as abandoned strip mines. However, pipelines would still fragment forests and impinge on sensitive habitats.

Forest loss and fragmentation are considered among the most serious threats to biodiversity.<sup>128,129</sup> Many forest species, particularly birds, require extensive tracts of continuous forest to maintain viable breeding populations. Inasmuch as the eastern United States was extensively deforested during the 1800s, one might ask whether current deforestation and fragmentation matter to biodiversity. At a maximum, only half of the east was deforested at once because clearing was not concurrent across the region; asynchronous deforestation prob-

ably prevented extinction of many species.<sup>129</sup> Yet deforestation contributed greatly to the extinction of the passenger pigeon (*Ectopistes migratorius*)<sup>130</sup> and the temporary loss or rarity of red-shouldered hawk (*Buteo lineatus*), wild turkey (*Meleagris gallopavo*), pileated woodpecker (*Dryocopus pileatus*), American beaver, black bear (*Ursus americanus*), fisher (*Martes pennanti*), and white-tailed deer from most of New York State and probably large regions elsewhere in the eastern United States.<sup>131</sup> Most of these species have recovered with the redevelopment of extensive forests, even to the point of overabundance of deer, bear, and turkey. Forest cover in the east is decreasing again,<sup>132</sup> and forests of the conterminous United States are fragmented to the degree that edge effects occur throughout most forested landscapes.<sup>133</sup> Fragmentation also affects grasslands and their breeding birds.<sup>16,134</sup> The many other stressors affecting freshwater organisms<sup>135</sup> may be compounded by water pollution and hydrological alteration from HVHFF.

Biotas are impoverished in industrial and urban areas, although many species thrive, including some rare species.<sup>136–138</sup> Few empirical data are available on biodiversity impacts of eastern HVHFF, although activities are already widespread and potentially will occur throughout 280,000 km<sup>2</sup>. HVHFF is also intensive, causing great changes to habitats at HVHFF installations and to the intervening landscapes. Consideration of a broad spectrum of taxa and guilds suggests potential HVHFF risks to biodiversity, particularly organisms that are specialized in their habitat, require unpolluted freshwater with natural hydropatterns, or have small geographic ranges concentrated in the Appalachian Basin. Impoverishment of species assemblages likely will lead to diminution of ecosystem functions and services.<sup>139</sup>

It is expected that an HVHFF installation will be decommissioned and the site restored after 40–50 years; procedures may include regrading, removing roads and impoundments, restoring topsoil, and native planting.<sup>71</sup> Restoration will accomplish more if it is targeted at habitats and species of conservation concern, rather than simply restoring forest or grassland. For example, CWD is important for salamanders, snakes, invertebrates, bryophytes, and lichens. Coarse woody debris could be stockpiled when a site is cleared and used for restoration of a nearby site that is being decommissioned. Construction,

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operation, and decommissioning of HVHFF facilities, if viewed as a mosaic across the landscape, could be better managed to reduce impacts on biodiversity. Most research on wild organisms is restricted in space and time; thus, we are not well equipped to understand and conserve on large scales.<sup>140</sup> Most regulation of HVHFF has occurred at the level of the individual wellpad; however, to protect biodiversity and ecosystem services, it may be necessary to plan and regulate at the level of the whole Marcellus–Utica region.

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### Conflicts of interest

The author declares no competing financial interest.

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## CO42 – Stop the Pipeline (cont’d)

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Hydraulic fracturing and biodiversity

Kiviat

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# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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### ENVIRONMENTAL REVIEWS AND CASE STUDIES

#### Hydraulic Fracturing Threats to Species with Restricted Geographic Ranges in the Eastern United States

Jennifer L. Gillen, Erik Kiviat

High-volume horizontal hydraulic fracturing (*fracking*) is a new technology that poses many threats to biodiversity. Species that have small geographic ranges and a large overlap with the extensively industrializing Marcellus and Utica shale-gas region are vulnerable to environmental impacts of fracking, including salinization and forest fragmentation. We reviewed the ranges and ecological requirements of 15 species (1 mammal, 8 salamanders, 2 fishes, 1 butterfly, and 3 vascular plants), with 36%–100% range overlaps with the Marcellus-Utica region to determine their susceptibility to shale-gas activities. Most of these species are sensitive to forest fragmentation and loss or to degradation of water quality, two notable impacts of fracking. Moreover, most are rare or poorly studied and should be targeted for research and management to prevent their reduction, extirpation, or extinction from human-caused impacts.

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The new technology of high-volume horizontal hydraulic fracturing to extract natural gas, known as *fracking*, has gained attention in the past few years. Fracking is the process of drilling vertically and then horizontally through deeply buried shale beds, and pumping water, sand, and chemicals at high pressures into the shales to release the natural gas. Part of this chemical and water mixture returns to the surface as *frack water*, which contains toxicants such as benzene and toluene from the fracking fluids, as well as radium and salt from the shales (Rowan et al., 2011; Schmidt, 2011). Although the impacts of fracking in the eastern states on drinking-water supplies and public health have been discussed extensively, little

attention has been paid to the effects of toxic chemicals, salt, habitat fragmentation, truck traffic, air pollution, noise, night lighting, and water withdrawals on ecosystems and their wild animals and plants (Davis and Robinson, 2012; Entrekin et al., 2011; Kiviat and Schneller-McDonald, 2011). The great spatial extent of industrialization and the rapid pace of development of shale-gas resources associated with fracking in the eastern United States (US) may result in environmental impacts disproportionate to economic benefits (Davis and Robinson, 2012). Many serious impacts of gas and oil mining on biodiversity have been documented in the US and Canadian West (Nangle, 2011). For example, compressor noise from gas-drilling installations was found to interfere with ovenbird (*Seiurus aurocapilla*) pairing success and alter population age structure (Habibi, Bayne, and Boutin, 2007). In the Marcellus shale-gas region, it is expected that fracking will exacerbate the natural migration of salt from the deep shale beds into shallow aquifers (Warner et al., 2012), which could adversely affect wild species adapted to strictly fresh groundwaters or to surface waters into which groundwaters discharge.

The largest occurrence of commercially exploitable gas shales—the Marcellus and Utica shale-gas region—extends beneath approximately 285,000 km<sup>2</sup> of the Appalachian Basin (calculated from the US agency maps cited in this article's Methods section). This region supports high species diversity and many endemic species with small geographic ranges and narrow habitat affinities. The Appalachian region is a global megadiversity region for salamanders, stream fishes, freshwater mussels, and crayfishes, and is home to more than 150 imperiled species (Stein, Kutner, and Adams, 2000). Because organisms with geographic ranges concentrated in shale-gas regions are at greater risk from fracking impacts (Kiviat and Schneller-McDonald, 2011), we reviewed the potential impacts of fracking on animal and plant species with ranges substantially restricted to areas underlain by the Marcellus and Utica shale-gas region.

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Hydraulic Fracturing Threats to Species 1



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### Methods

We focused on species that have geographic ranges of which 35% or more is underlain by the Marcellus and Utica shale gas region; we refer to these species as *quasi-endemic* to the Marcellus-Utica region. The cutoff of 35% has precedent in conservation science and is considered a high percentage overlap in the Natural Capital Project's habitat risk assessment model (Arkema, Bernhardt, and Verutes, 2011). By reviewing publicly available range maps, we selected 15 species that met the 35% criterion and are currently accepted as full species in standard taxonomic treatments [e.g., US Department of Agriculture (USDA), 2012].

We then studied each species' natural history, habitat needs, and legal status for indications of vulnerability to the physical and chemical effects of fracking. For example, eight species are salamanders in the family Plethodontidae. These lungless salamanders are particularly sensitive to environmental changes because they respire through their skin and require constant contact with moisture (Welsh and Droege, 2001). After selecting species, geographic information system (GIS) software was used to calculate the percentage overlap with the gas shales. We obtained geographic range data for mammals and amphibians from the International Union for Conservation of Nature (IUCN) Red List Spatial Data Download website (2012), for plants from the USDA (2012), for fishes from NatureServe (2011), and for butterflies from Butterflies and Moths of North America (BAMONA, 2012). We combined digital maps of the Marcellus and Utica shale formations obtained from the US Energy Information Administration (2012) and the US Geological Survey (2002) to create a single map layer showing the region underlain by both formations. We used ArcMap 10.0 (ESRI, Redlands, CA) to establish the overlap between each species' range and the shale boundary, to calculate the percentage overlap, and to create the maps depicting the species ranges in relation to the Marcellus and Utica shale-gas region.

Various federal agency maps indicate that the area of the combined Marcellus and Utica shales is in the range of 268,000 to 340,000 km<sup>2</sup>. We use the conservative figure of 285,000 km<sup>2</sup> for our analyses.

One of the selected species, Bailey's sedge, extends northward into a small area of Québec, yet we have analyzed only the US portion of its range. Because Canadian and US practices differ with regard to managing this rare species, and the species undoubtedly varies genetically in different

portions of its range, we believe it is important to protect this plant within the US regardless of its status in Canada. Another species, northern blue monkshood, which occurs in small areas of Wisconsin, Iowa, Ohio, and New York (USDA, 2012), may be part of a widespread western species, Columbian monkshood (*Aconitum columbianum*; Cole and Kachenreuther, 2001). However, because there is a disjunction of 800 km between the Ohio and Wisconsin populations, suggesting the potential for evolutionary divergence, we have included only the Ohio-New York populations in our analysis. Evolutionary potential must also be considered when determining the ecological effects of fracking. We assessed potential impacts at the species level, but genetic variation below the species level may have an even higher overlap with the shales.

### Results and Discussion

We reviewed 15 species with restricted geographic ranges having 35%–100% overlap with the Marcellus and Utica shale-gas region (Table 1 and Figure 1). Of the 15 species selected, there are 8 plethodontid salamanders, 2 stream fishes, 1 mammal, 1 butterfly, and 3 plants. The total geographic range size varies from 3 to 292,261 km<sup>2</sup>, with a mean of 91,075.3 km<sup>2</sup> and median of 59,988 km<sup>2</sup>. The mean overlap with the shale-gas region is 64.4%, and the median is 68%. Ten species have 50% or greater overlaps with the shales, and four have 40%–49% overlap. These overlap figures indicate the potential for impacts to occur over large portions of these species' ranges and, given the cumulative impacts of other intensive land uses such as coal mining, agriculture, residential development, and logging, raise substantial concerns about species survival. The sensitivities of these species to habitat degradation at the landscape and regional levels are suggested by the data in Table 1. Of the 15 species, 4 are listed as endangered or threatened at the federal level or in at least one state where the species occurs. Of the 15 species, 11 are stated to depend on good water quality, 10 to be sensitive to habitat fragmentation, 13 are either stenotopic (have narrow habitat affinities) or are sensitive to changes in habitat, and 11 are threatened by deforestation (Table 1).

Species with smaller geographic ranges are more vulnerable to extinction than are species with larger ranges (Payne and Finnegan, 2007), and species with smaller populations (numbers of individuals) are more vulnerable than are species with larger populations (Noss and Cooperrider, 1994; Slobodkin, 1986). Thus, reductions in range size are expected to make a species more vulnerable to extinction. Reductions in

Table 1. Selected species of animals and plants with restricted geographic ranges and a high degree of overlap with the combined Marcellus and Utica shale-gas region.

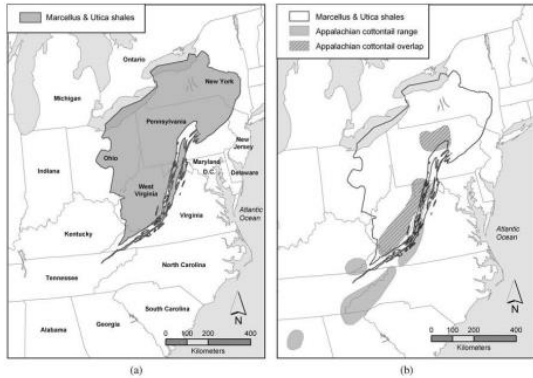
\* Total area of geographic range (calculations do not account for the fragmented ranges of some species, thus area occupied may be smaller than the figures shown).

\* Reported as sensitive to habitat fragmentation (see references cited).  
 † Reported as having narrow habitat affinities or as sensitive to habitat change (see references cited).  
 ‡ Reported as dependent on forested environments or sensitive to deforestation (see references cited).  
 MICHES Massachusetts Natural Heritage and Endangered Species Program; NYNHP, New York Natural Heritage Program; ONHP, Ohio Natural Heritage Program; USDA, US Department of Agriculture; USEPA, US Environmental Protection Agency.

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**Figure 1.** Maps showing the areas underlain collectively by the Marcellus and Utica shale-gas region, the geographic ranges of selected species, and the overlap between shales and species: (a) Marcellus-Utica Shale outline, (b) Appalachian cottontail, (c) Allegheny mountain dusky salamander, (d) West Virginia spring salamander, (e) Webster's salamander, (f) valley and ridge salamander, (g) Cheat Mountain salamander, (h) white-spotted salamander, (i) Shenandoah Mountain salamander, (j) northern ravine salamander, (k) tongue-tied minnow, (l) blackbreast darter, (m) Appalachian azure, (n) shale-barrens pimpernel, (o) Bailey's sedge, and (p) northern blue monkshood. Range maps for species are from the International Union for Conservation of Nature (2011), the US Department of Agriculture (2012), and Butterflies and Moths of North America (2012). See Table 1 for calculated areas of the geographic ranges and percentage overlaps with the shales.

forest area may result in great reductions of the number of species (Drakare, Lennon, and Hillebrand, 2006), and most of the species in our sample are closely associated with forests. The remainder of this discussion addresses the ecological requirements of the various groups of organisms that may make them vulnerable to fracking impacts.

**Mammals**

The Appalachian cottontail, recently separated by systematists from the New England cottontail, is found in mixed-oak forests with ericaceous (heath family) shrub cover (Bunch et al., 2012) and has a highly fragmented range, extending from Pennsylvania to Alabama (Barry and Lazell, 2008). Habitat needs are most likely different from those of the New England cottontail, but because this is not known, the

species cannot yet be managed in a targeted way (Bunch et al., 2012). The Appalachian cottontail is declining and the number of local populations is decreasing due to habitat destruction, fragmentation, and forest maturation (Barry and Lazell, 2008; Hamishfefer, 2010). Fracking uses large areas of land for drill pads and pipelines, and roads must be constructed to enable truck traffic back and forth from drill sites. An average of 8.8 acres of forest is cleared for each Marcellus drill site and, with an additional indirect impact (through edge effects) on 21.2 acres, an average of 30 acres of forest is impacted at each site (Johnson, 2010). For a species that is threatened by habitat destruction and fragmentation, fracking could further reduce population and cause endangerment. The IUCN lists the Dolly Sods Wilderness Area, West Virginia, as a major source population for smaller populations of Appalachian cottontails

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CO42 – Stop the Pipeline (cont’d)

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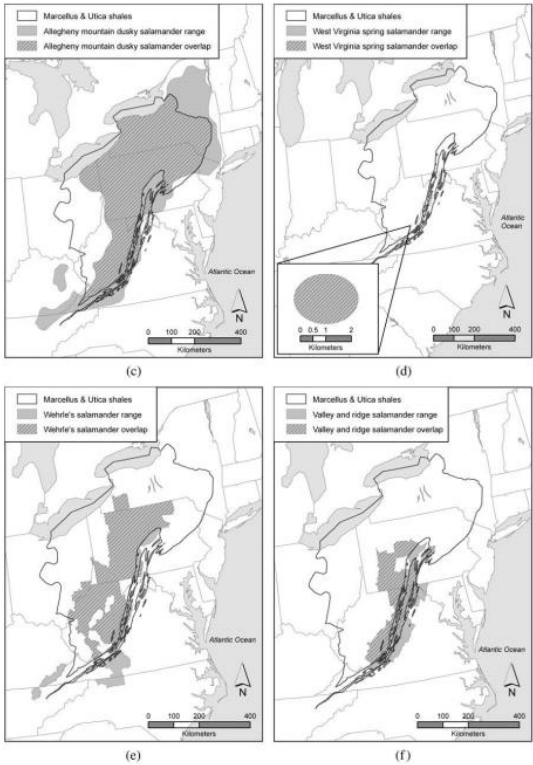


Figure 1. Continued

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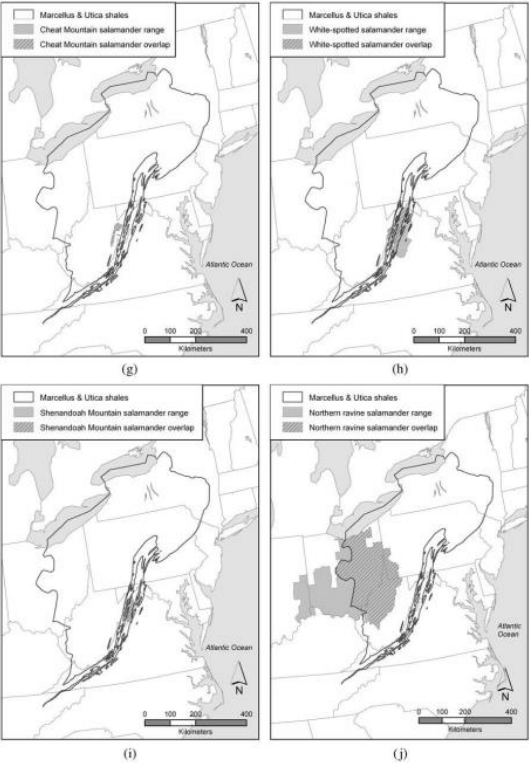


Figure 1. Continued

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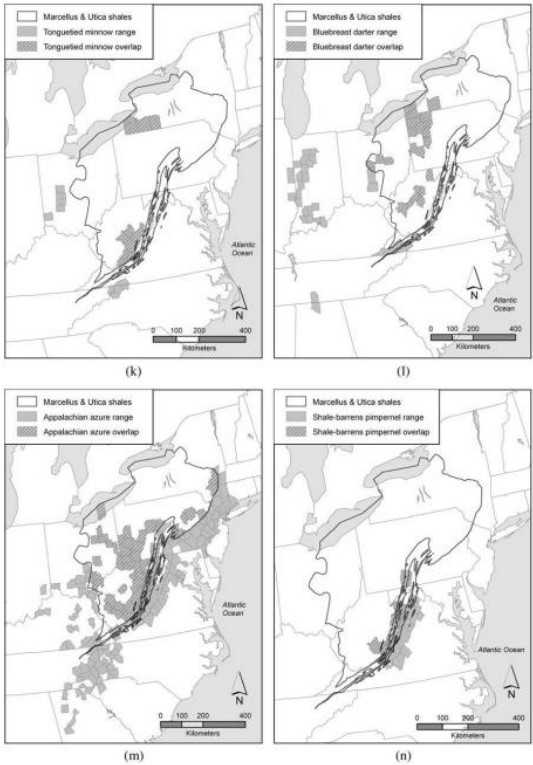
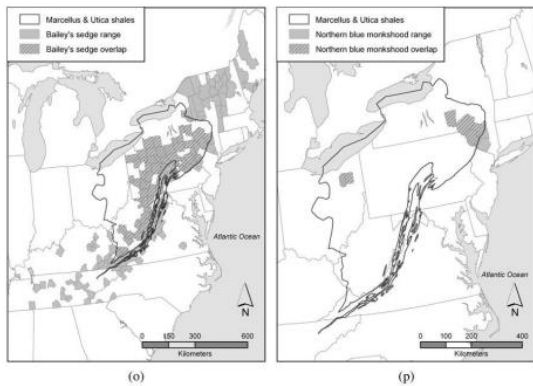


Figure 1. Continued

COMPANIES AND ORGANIZATIONS

CO42 – Stop the Pipeline (cont'd)

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(Barry and Lazell, 2008), and if this population were severely affected by habitat destruction or fragmentation caused by fracking, those populations that depend on Dolly Sods for gene flow would be negatively impacted.

Salamanders

The Plethodontidae, which is the largest family of salamanders, represents significant diversity (Petranka, 1998). Plethodontids are rapidly evolving, and too little is known about 43% of species to manage them successfully (Wyman, 2003). Many plethodontids, such as the Shenandoah Mountain salamander and the northern ravine salamander (Table 1), have only recently been recognized as species, and their habitat requirements and management needs are poorly understood (Highton, 1999). There is especially a lack of knowledge about the vulnerable juvenile terrestrial plethodontids (Wyman, 2003).

Terrestrial salamanders have difficulty crossing roads, and roads may reduce both their abundance and genetic diversity. Roads not only fragment habitats but may also be obstacles to salamanders (Wyman, 2003). Forest roads have

been shown to reduce terrestrial salamander movement by 51%, and multiple roads could reduce dispersal by up to 97%. Although roads may not have major implications for species with large ranges and high abundances, species with limited ranges and low abundances may be severely affected by new roads because they are already impacted by fragmentation, logging, and other human activities (Marsh, Gorham, and Beckman, 2005). Plethodontids such as the white-spotted salamander and the Cheat Mountain salamander have small distributions and are currently affected by fragmentation and deforestation (Hammerson, 2004; Hammerson and Mitchell, 2004); multiple roads and truck traffic, when compounded with many other destructive factors, could imperil these species' survival. After clear-cutting, salamander communities take decades to recover from the drying of soils in logged areas, changes in the prey community, and the difficulty many salamander species have in crossing nonforested habitats (e.g., Ash, 1997; Bratton and Meier, 1998; Mitchell, Wicknick, and Anthony, 1996; Petranka, Eldridge, and Haley, 1993). The perforation of forests by well pads, access roads, and pipeline rights-of-way, with associated microclimatic drying, salinization, and other changes, presumably reduces or eliminates local

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populations of many salamander species in fracking landscapes, and this could contribute cumulatively to a decline or loss of species over large areas.

The wastewater from fracking installations is another potential threat to salamanders. After well fracking is completed, 30%-70% of the water injected into the well returns to the surface with contaminants from the shales and the fracking chemicals (Schmidt, 2011). In Pennsylvania and West Virginia, frack water has been sprayed on land, diluted in municipal sewage treatment plants, stored in open pits, partially reused, leaked, and spilled (Kiviat and Schneller-McDonald, 2011). Preliminary data from Pennsylvania streams indicate that conductivity was higher and biotic diversity (including salamanders) was lower in small watersheds where fracking had occurred (Anonymous, 2010). Saline wastewater can pollute streams and other bodies of water, and many stream-dwelling and water-dependent organisms are salt sensitive. Salamanders, especially those with aquatic larvae, are sensitive to water quality (Duncan et al., 2011). The West Virginia spring salamander has been found in a single cave in Greenbrier County, West Virginia; the adults reside in the mud banks next to the stream passage, and the aquatic larvae develop in the stream (Besharse and Holsinger, 1977). Fewer than 250 mature individuals of this species exist, and all of these salamanders are dependent on the stream that runs through the General Davis Cave (Hammerson and Beachy, 2004)—if this stream were to be polluted by salt or fracking chemicals, the species would be in danger of extinction. Although much of the toxicological research has been conducted on frogs rather than salamanders, amphibians in general are vulnerable to many contaminants, including organic chemicals, heavy metals, and metalloids (Herfenist et al., 1989).

Fishes

There is a high probability of water pollution from spills of fracking wastewater (Rozell and Reaven, 2012), and stream fishes are vulnerable to this impact. The tongueued minnow is intolerant of water pollution (US Environmental Protection Agency, 2010), although there is not enough information on this species to determine how it would be affected by fracking. The bluebreast darter is critically imperiled in New York, imperiled in both Ohio and Virginia, and vulnerable in West Virginia and requires good water quality (Losey, Roble, and Hammerson, 2011; Pennsylvania Natural Heritage Program, 2012), making it particularly vulnerable to fracking activities.

Butterflies

The Appalachian azure inhabits deciduous forests, and its larval food plant is black cohosh (*Actaea racemosa*). The butterfly is scarce and has difficulty moving between forest fragments. Black cohosh is potentially threatened by non-native plants and white-tailed deer (*Odocoileus virginianus*) (New York Natural Heritage Program, 2011), both of which are likely to benefit from fracking.

Plants

Plants will also be affected by fracking through fragmentation, increased salinity levels, and pollution by toxic chemicals. The northern wild monkshood is a federally threatened plant at risk of soil contamination, drying due to canopy loss, and nonnative plants. The monkshood occurs in only four states, of which New York and Ohio overlap with the Marcellus and Utica shale-gas region. Monkshood has narrow habitat affinities, grows slowly, is very sensitive to disturbance, and there is probably little gene flow among the isolated populations (Edmondson et al., 2009; Ohio Natural Heritage Program, 2007); forest fragmentation and increased salinity caused by fracking could imperil an already threatened species. Forest fragmentation is known to facilitate the spread of nonnative, potentially invasive, plants (e.g., Yates, Levia, and Williams, 2003).

Potential Benefits to Biodiversity

Fracking may benefit some species as well as harm others. Industrial activity creates habitats that may be used by rare or economically important species. For example, Noel et al. (1998) documented carbon (*Rangifer tarandus*) using gravel pads associated with oil drilling for insect relief habitat. Schmidt and Kiviat (2007) found a globally rare clam shrimp [*Cypicis (Caenetheriella) gynecia*] in rain pools on a gas pipeline road in New Jersey. However, artificial industrial habitats tend to support common species that are ecological generalists (E. Kiviat, personal observations) rather than species of conservation concern. We expect that fracking installations will provide habitats for a few noteworthy species while degrading the environment for many others. Appalachian cottontail is known to use shrublands and several-year-old clear-cuts (Cannings and Hammerson, 2012); thus, gas-pipeline rights-of-way and abandoned well pads might provide acceptable habitat. Undoubtedly, other species of conservation concern could be managed for in fracking landscapes, and research to provide the basis for such management is urgently needed. Forest fragmenta-



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## CO42 – Stop the Pipeline (cont'd)

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tion in fracking landscapes, because of the dispersed character of the industry, cannot be avoided.

### Summary

Hydraulic fracturing poses serious threats to a diverse group of species, including plants, butterflies, fishes, and salamanders, that have restricted geographic ranges overlapping substantially with the Marcellus and Utica gas shales. Of the 15 species we reviewed, many are so little known that targeted management would be based on insufficient evidence. Of these, 13 have narrow habitat affinities and 11 are dependent on good water quality (Table 1), making them particularly vulnerable to fracking effects such as elevated salinity and other pollution.

### Conclusions

Although fracking will likely be permitted in most states underlain with gas shales, if biodiversity and human impacts are well studied, appropriate regulations can be implemented. Because New York has not yet permitted high-volume horizontal hydraulic fracturing, there is an opportunity to protect the quasi-endemic species whose ranges extend into New York, including northern blue monkshood, Wehrle's salamander, Allegheny mountain dusky salamander, and Appalachian azure. Many organisms are undergoing poleward range shifts caused by climate change, but because changes in range limits are species specific and subject to many biological and abiotic interactions (Wyman, 1991), we cannot know whether overlap percentages with gas shales will increase or decrease. Range contraction (local or regional extirpation) due to other causes may increase the percentage overlap of the remaining range with the Marcellus-Utica region, thus cumulatively increasing the risk posed by fracking; the Allegheny woodrat (*Neotoma magister*; LoGiudice, 2003) may be an example.

We reviewed species for which range maps are available; there are many more species with no range maps or so little ecological information that it would be impossible to assess how fracking may affect them. There are almost certainly many species of invertebrates, plants, lichens, and other organisms that are quasi-endemic to the Marcellus-Utica region, but lack of access to range maps and ecological information prohibited their inclusion in our study. The species selected in this study may actually have a much greater overlap with the shales (because habitat range maps are generalized or out of date), and thus potential effects of

fracking could be greater than the percentages in Table 1 suggest. Also, ecological impacts like mountaintop-removal mining, logging, climate change, and other industrial activities will compound the effects of fracking, making these species vulnerable to decline and extinction. Future studies should include a broader range of taxa and field research that can measure the impacts of fracking while considering how these impacts may be compounded by other threats to biodiversity.

Biodiversity at all levels, from genes to ecosystems, constitutes many important values to human society and ecosystem functions, as well as the intrinsic importance of each species (Wilson, 1992). Conserving biodiversity is important because each species has unique compounds, behaviors, and other information that we may be able to use to improve human health, biotechnology, and enjoyment. Biodiversity is also of great value to the function of ecosystems—and we do not know how the elimination of certain species will affect ecosystem function. Many of the species selected not only have restricted geographic ranges, but live in small, isolated populations that would be negatively affected by further fragmentation. A number of these species are also recently described species, and most are little known ecologically. Intensive industrial activities such as fracking that potentially affect an almost 300,000-km<sup>2</sup> region need to be thoroughly studied so that researchers and natural resource managers can assess impacts on biodiversity and humanity.

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## CO42 – Stop the Pipeline (cont'd)

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Submitted May 18, 2012; revised August 6, 2012; accepted August 27, 2012.

**COMPANIES AND ORGANIZATIONS**

**CO42 – Stop the Pipeline (cont’d)**

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CO42-96  
cont'd

Exhibit 4  
Kiviat CV

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-96  
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Hudsonia Ltd  
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1 November 2013

### ERIK KIVIAT

#### Recent Professional Experience

**Hudsonia Ltd.**: *Executive Director*, 1988- (excepting two years); *Ecologist*, 1981-1988; Co-founder.

**Bard College**: *Associate Professor* then *Professor of Environmental Studies*; Graduate School of Environmental Studies, 1987-2005; Research Associate, Division of Natural Sciences and Mathematics, 2002-.

*Technical assistance to*: Non-governmental organizations; landowners; businesses; planning, law, and engineering firms; sporting associations; federal, state and local government; in New York, New Jersey, Connecticut, Massachusetts, Ohio; more than 250 reports prepared, 1975-.

*Professional workshops taught*: Winter Woody Plant Identification (1 day, with Gretchen Stevens); Reptile and Amphibian Survey Methods (2 days, with T. Hartwig); *Phragmites* Ecology and Management (1 day); Wetland Habitat Creation and Turtle Conservation (1 day, with G. Stevens, T. Hartwig).

*Fellowships*: Cary Summer Research Fellowship 1993, Institute of Ecosystem Studies, Millbrook, NY. Vegetation and biogeochemistry of Blanding's turtle habitats. Short-term Visitor, 1995, Smithsonian Environmental Research Laboratory, Edgewater, MD. Freshwater-tidal and nontidal wetland studies.

*Peer Reviewer*: *Biological Invasions*; *Chelonian Conservation and Biology*; *Estuaries*; *Journal of Herpetology*; *Journal of the Marine Biological Association of the United Kingdom*; *New York State Museum Bulletin*; *Northeastern Naturalist*; *Studies in Avian Biology*; *Urban Habitats*; *Wetlands*; *Wetlands Ecology and Management*; *Wilson Bulletin*; *American Museum of Natural History*; Countryman Press; Hudson River Foundation; Long Island Sound License Plate Fund; Marsh Ecology Research Program (NJ); Rutgers University Press; San Francisco Bay-Delta Research Enhancement Program; Sea Grant (Connecticut, Rhode Island); State University of New York Press; Nature Conservancy; U.S. Fish and Wildlife Service; U.S. Geological Survey; U.S. Office of Technology Assessment.

*Volunteer* (selected): Turtle research, Jug Bay Wetlands Sanctuary, Maryland, 1990s-2000s; Ontario Breeding Bird Atlas, Hudson Bay Lowland, Canada, 1985; Herpetofaunal surveys, Jekyll Island, GA, 1979-2013; Osprey survey and herpetofaunal survey, St. Catherine's Island, GA, 1973; Reptile and amphibian population studies, Kalbfleisch Field Research Station, Long Island, NY, 1963, additional reptile and amphibian surveys in New York, Massachusetts, Georgia, and Mexico, American Museum of Natural History, 1961-1979.

#### Education

Ph.D. Ecology, Union Institute and University, 1991. Thesis: *Wetland human ecology*.

M.A. Biology, State University at New Paltz, NY, 1979. Thesis: *Hudson Estuary shore zone: Ecology and management*.

B.S. Natural Sciences, Bard College, 1976. Thesis: *Snapping turtle ecology in a New York tidemarsh*.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont’d)

CO42-96  
cont'd

*Professional courses taken:* Wildlife Study Design (1 day), Wildlife Society, 2002; Biology of Spiders (5 days), Humboldt Field Research Institute, ME, 2001; Mosquito Identification and Surveillance (2 days), New York State Department of Health, 2000; Applied Multivariate Methods (5 days), Institute for Professional Education, VA, 1995; Control of Mosquitoes and Mosquito-borne Diseases in the U.S. (5 days), International Center for Public Health Research, SC, 1993; Understanding Wetland Soils (2 days), Cook College, Rutgers University, NJ, 1989; Landscape Preservation: Ecological and Social Issues (1 day), Institute of Ecosystem Studies, Millbrook, NY, 1987; Energy Analysis (1 day), University of Georgia, Athens, 1977; Freshwater Fishes of New York (5 days), American Museum of Natural History, New York, NY, 1970.

**Research Interests**

Wetland ecology and management; Nonnative and overabundant species ecology and management; Turtle ecology and conservation; Habitat ecology, assessment, monitoring, creation, restoration, connectivity; Urban and rural biodiversity, rare or little-known species; Hydraulic fracturing impacts on biodiversity; Human cultural adaptations to wetlands and vector-borne diseases; Ethnobotany - economic botany.

**Additional Field Work**

Arizona, California, Colorado, Connecticut, Florida, Georgia, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Nebraska, New Jersey, New Mexico, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, Texas, Utah, Vermont, Washington; Manitoba, Nova Scotia, Ontario, Québec; México; Trinidad; Czech Republic; Germany; England; Scotland; Hungary; Italy; Botswana.

**Languages:** French and Spanish (reading).

**Professional Certifications**

Professional Wetland Scientist, Society of Wetland Scientists, 1995-;

Qualified Bog Turtle Surveyor in New York, U.S. Fish & Wildlife Service.

**Honors**

Awarded to Erik Kiviat or to Hudsonia for projects or programs he directed: Nominations for National Wetlands Award 2002, 2009-2011; Certificate of Appreciation, New York State Department of Environmental Conservation, 2000; Good Land Award, Winnakee Land Trust, 1999, 2008; Project Facilitation Award, Society for Ecological Restoration, 1997; Marion Thompson Fuller Brown Conservation Award, Garden Clubs of America, 1996; Environmental Award, Museum of the Hudson Highlands, 1996; Award for Environmental Sensitivity, Mohonk Consultations on the Earth's Environment, 1995; Researcher of the Year Award, Hudson River Environmental Society, 1994; Service Award, Dutchess County Environmental Management Council, 1982.

**Professional Societies**

American Bryological and Lichenological Society; Association of Field Ornithologists; Association of State Wetland Managers; Natural Areas Association; Society for the Study of Amphibians and Reptiles; Society of Wetland Scientists; Southern Appalachian Botanical Society; Torrey Botanical Society; Wilson Ornithological Society.

**Public Service**

Invited participant, recovery workshops for bog turtle, U.S. Fish and Wildlife Service (FWS) and New York State Department of Environmental Conservation (DEC), 2011-2012; Steering Committee, Northeast Natural History Conference, 2010; Invited participant, recovery workshops for Blanding's turtle, timber rattlesnake, northern cricket frog, New England cottontail, DEC, 2009-; Scientific Advisory

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-96  
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Committee, Hudson River Almanac; Advisory Committee for Quadricentennial Exhibit, Albany Institute for History and Art, 2008; co-sponsor, Japanese Knotweed Managers' Workshop, 2005; co-convenor, Hackensack Meadowlands Symposium, 2003; Greene County (NY) Habitat Management Advisory Committee, 2003-; Advisory Committee for Hudson River Estuary Exhibit, Liberty Science Center, 2002-2007; Scientific Advisory Committee, New York - New Jersey Trail Conference, 2002-2008; Co-sponsor, *Phragmites* Forum, 2002; Convenor of the workshop *Purple Loosestrife and Wildlife in North America*, Northeast Fish and Wildlife Conference, 2001; Conservation and Recovery of the Bog Turtle (invited participant), FWS, 1998; Jug Bay Wetlands Sanctuary Advisory Committee, 1998-; Scientific Advisory Committee, Friends of the Great Swamp, 1998-; Hudson River Biodiversity Committee, DEC, 1997-; Scientific Advisory Committee, Hudson River Habitat Restoration Program, U.S. Army Corps of Engineers, 1994-95; Editorial Board, *Water Ways: New York's Waterfront News*, 1990-92; Hudson River National Estuarine Research Reserve Advisory Committee, 1983-; Hudson River Fisheries Advisory Committee, 1979-83, Hudson River Valley Study Advisory Committee, 1978, DEC; Wildlife Society New York Chapter, Committee on Exotic Plants (1981-87); Advisory Board of the Trevor Zoo (1981-94); Dutchess County Environmental Management Council Significant Areas Committee (1980-82); Storm King School Environmental Institute Advisory Board, 1983-85; Convenor of Hudson River Marsh Workshop, Hudson River Environmental Society, 1976.

**Technical Publications** (\* Peer reviewed)

Kiviat, E. 2013. Risks to biodiversity from hydraulic fracturing for natural gas in the Marcellus and Utica shales. *The Year in Ecology and Conservation Biology* 2012, *Annals of the New York Academy of Sciences* 1286:1-14. (Invited paper.) \*

Kiviat, E. 2013. Ecosystem services of *Phragmites* in North America with emphasis on habitat functions. *AoB Plants* 2013, doi: 10.1093/aobpla/plt008. 29 p. (Invited paper.) \*

Gillen, J. & E. Kiviat. 2012. Hydraulic fracturing threats to species with restricted ranges in the eastern United States. *Environmental Practice* 14(4):320-331. \*

Kiviat, E. 2011. Frog call surveys in an urban wetland complex, the Hackensack Meadowlands, New Jersey, 2006. *Urban Habitats* 6 (unpaginated). Available at: [urbanhabitats.org](http://urbanhabitats.org). \*

Dowling, Z., T. Hartwig, E. Kiviat & F. Keesing. 2010. Experimental management of nesting habitat for the Blanding's turtle (*Emys blandingii*). *Ecological Restoration*. 28(2):154-159. \*

Kiviat, E., G. Mihocho, G. Stevens, P.M. Groffman & D. Van Hoewyk. 2010. Vegetation, soils, and land use in fens of eastern New York and adjacent Connecticut. *Rhodora* 112(952):335-354. \*

Kiviat, E. 2009. Human uses of tidal freshwater wetlands on the USA East Coast. P. 21-30 in A. Barendregt, D. Whigham & A. Baldwin, eds. *Tidal Freshwater Wetlands*. Backhuys Publishers, Leiden, The Netherlands. (Invited chapter.) \*

Kiviat, E. 2009. Invasive plants in tidal freshwater wetlands - North American East Coast. P. 106-114 in A. Barendregt, D. Whigham & A. Baldwin, eds. *Tidal Freshwater Wetlands*. Backhuys Publishers, Leiden, The Netherlands. (Invited chapter.) \*

Swarth, C. & E. Kiviat. 2009. Animal communities in North American tidal freshwater wetlands. P. 71-88 in A. Barendregt, D. Whigham & A. Baldwin, eds. *Tidal Freshwater Wetlands*. Backhuys Publishers, Leiden, The Netherlands s. (Invited chapter.) \*

Schmidt, R.E. & E. Kiviat. 2007 (2008). State records and habitat of clam shrimp, *Caenestheriella gynecia* (Crustacea: Conchostraca), in New York and New Jersey. *Canadian Field-Naturalist* 121:128-132. \*

Hartwig, T. & E. Kiviat. 2007. Microhabitat use by Blanding's turtle in constructed and reference wetlands. *Journal of Wildlife Management* 71(2):576-582. \*

Kiviat, E. 2010. *Phragmites* Management sourcebook for the tidal Hudson River and the northeastern states. Hudsonia Ltd., Annandale NY 12504 USA. 74 p. ([www.hudsonia.org](http://www.hudsonia.org))

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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Kiviat, E., S.E.G. Findlay & W.C. Nieder. 2006. Tidal wetlands. P. 279-295 in J.S. Levinton & J.R. Waldman, eds. *The Hudson River Estuary*. Cambridge University Press, New York, NY. (Invited chapter.)

Kiviat, E., guest editor. 2004. The Hackensack Meadowlands: History, ecology, and restoration of a degraded urban wetland. *Urban Habitats* 2(1) ([www.urbanhabitats.org](http://www.urbanhabitats.org)). \*

Kiviat, E. & K. MacDonald. 2004. Biodiversity patterns and conservation in the Hackensack Meadowlands, New Jersey. *Urban Habitats* 2(1):28-61 ([www.urbanhabitats.org](http://www.urbanhabitats.org)). \*

Hummel, M. & E. Kiviat. 2004. Review of world literature on water-chestnut (*Trapa natans*) with implications for management in North America. *Journal of Aquatic Plant Management* 42(1):17-28. \*

Kiviat, E. 2004. Occurrence of *Ailanthus altissima* on a Maryland freshwater tidal estuary. *Castanea* 69(2):139-142. \*

Kiviat, E. 2004. Concluding remarks. P. 101-103 in C. Swarth, W. Roosenberg & E. Kiviat, eds. *Conservation and Ecology of Turtles of the Mid-Atlantic Region; A Symposium*. Bibliomania!, Salt Lake City, Utah.

Kiviat, E., G. Stevens, K.L. Munger, L.T. Heady, S. Hoeger, P.J. Petokas & R. Brauman. 2004. Blanding's turtle response to wetland and upland habitat construction. P. 93-99 in C. Swarth, W. Roosenberg & E. Kiviat, eds. *Conservation and Ecology of Turtles of the Mid-Atlantic Region; A Symposium*. Bibliomania!, Salt Lake City, Utah. \*

Schmidt, R.E., T.W. Hunsinger, T. Coote, E. Griffin-Noyes & E. Kiviat. 2004. Mudpuppy (*Necturus maculosus*) in the tidal Hudson River with comments on its status as native. *Northeastern Naturalist* 11(2):179-188. \*

Swarth, C., W. Roosenberg & E. Kiviat, eds. 2004. *Conservation and ecology of turtles of the Mid-Atlantic region; A Symposium*. Bibliomania!, Salt Lake City, Utah. 121 p. \*

Talmage, E. & E. Kiviat. 2004. Japanese knotweed and water quality on the Batavia Kill in Greene County, New York: Background information and literature review. Greene County Soil and Water Conservation District and New York City Department of Environmental Protection. 27 p. [www.geswcd.com/stream/knotweed/reports/litreview/JKandwaterquality.pdf](http://www.geswcd.com/stream/knotweed/reports/litreview/JKandwaterquality.pdf)

Bannor, B. & E. Kiviat. 2002. Common moorhen (*Gallinula chloropus*). *Birds of North America* 685, 27 p. \*

Findlay, S.E.G., E. Kiviat, W.C. Nieder & E.A. Blair. 2002. Functional assessment of a reference wetland set as a tool for science, management and restoration. *Aquatic Sciences* 64:107-117. \*

Kiviat, E. & K. MacDonald. 2002. Hackensack Meadowlands, New Jersey, biodiversity: A review and synthesis. Hackensack Meadowlands Partnership. 112 p. Available at [www.hudsonia.org](http://www.hudsonia.org). \*

Kiviat, E. & E. Hamilton. 2001. *Phragmites* use by Native North Americans. *Aquatic Botany* 69(2-4):341-357. \*

Kiviat, E. & G. Stevens. 2001. Biodiversity assessment manual for the Hudson River estuary corridor. New York State Department of Environmental Conservation, New Paltz, New York. 508 p. \*

Connors, L.M., E. Kiviat, P.M. Groffman & R.S. Ostfeld. 2000. Muskrat (*Ondatra zibethicus*) disturbance to vegetation and potential net nitrogen mineralization and nitrification rates in a fresh-tidal marsh. *American Midland Naturalist* 143:53-63. \*

Kiviat, E., G. Stevens, R. Brauman, S. Hoeger, P.J. Petokas & G.G. Hollands. 2000. Restoration of wetland and upland habitat for Blanding's turtle. *Chelonian Conservation and Biology* 3(4):650-657. \*

Meyerson, L.A., K. Saltonstall, L. Windham, E. Kiviat & S. Findlay. 2000. A comparison of *Phragmites australis* in freshwater and brackish marsh environments in North America. *Wetlands Ecology and Management* 8(2-3):89-103. \*

van Hoewyk, D., P.M. Groffman, E. Kiviat, G. Mihocko and G. Stevens. 2000. Soil nitrogen dynamics in organic and mineral soil calcareous wetlands in eastern New York. *Soil Science Society of America Journal* 64(6):2168-2173. \*



# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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- Kiviat, E. 1997. The book of swamp and bog; Trees, shrubs, and wildflowers of eastern freshwater wetlands. J. Eastman. *Canadian Field-Naturalist* 111(4):699. (Book review.)
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# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-96  
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### Popular Publications (selected)

- Kiviat, E. 2012. Urban biodiversity is not an oxymoron. *News from Hudsonia* 26(1):4-5.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-96  
cont'd

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Kiviat, E. 2005, 2007. What does reed (*Phragmites*) ecology tell us about reed management? Parts 1-2. *News from Hudsonia* 20(1), 21(1).

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Hartwig, T. & E. Kiviat. 2003. A second look at invasives. *Volunteer Monitor* 15(2):13-15.

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Munger, K. & E. Kiviat. 2001. The Blanding's turtle. New York State Office of Parks, Recreation and Historic Preservation, Albany. 8 p.

Kiviat, E. 2000. Why natural history is serious science. *News from Hudsonia* 15(2-3):1-3.

Kiviat, E. 2000. "Humans alter where the wild live." P. 121 in *The Hudson Valley: Our Heritage, Our Future*. Poughkeepsie Journal, Poughkeepsie, New York.

Heady, L. & E. Kiviat. 2000. Grass carp and aquatic weeds: Treating the symptom instead of the cause. *News from Hudsonia* 15(1):1-3.

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# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-96  
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- Kiviat, E. 1993. A tale of two turtles; Conservation of the Blanding's turtle and bog turtle. *News from Hudsonia* 9(3):1-6.
- Kiviat, E., G. Stevens & S. Barbour. 1993. Blossoms and clay: Landfill siting, wetlands, and biodiversity. *News from Hudsonia* 9(2):1-7.
- Kiviat, E. 1993. Under the spreading water-chestnut. *News from Hudsonia* 9(1):1-6.
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- Kiviat, E. 1991. How biologists assess special resources: All about Eve's Point. *News from Hudsonia* (July):1-6 and *UpRiver/DownRiver* (July-Aug.):48-53.
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- Kiviat, E. 1990. Reflections on Hudson River shorefront development. *News from Hudsonia* (April):1-6.
- Kiviat, E., R.E. Schmidt & J.S. Tashiro. 1988. Epibenthic life in the Hudson River. *News from Hudsonia* (March):1-2, 5-6.
- Kiviat, E. 1987. Mills and minnows; A walk down the Saw Kill. Bard College, Annandale, NY. 22 p. (Nature trail.)
- Kiviat, E. 1987. Iona Island Marsh; A Hudson River National Estuarine Sanctuary & Research Reserve. Hudson River Sloop Clearwater and Hudson River National Estuarine Research Reserve. (Brochure.)
- Kiviat, E. 1985. Vegetation. P. 101-122, 187 in H. Thomas, ed. Dutchess County, New York Natural Resources. Dutchess County Department of Planning, Poughkeepsie, NY.
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- Roberts, R., J. Stapleton, J. Morreale, E. Kiviat & M. Rosenthal. 1984. Feasibility of utilizing apple processing wastes. *International Bio-Energy Directory and Handbook - 1984*:315.
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- Kiviat, E. 1980. Low tides and turtle trails. *Hudson Valley* 9(5):27-29.
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COMPANIES AND ORGANIZATIONS

CO42 – Stop the Pipeline (cont’d)

CO42-96  
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Kiviat, E. 1977. Reptiles and amphibians of the Hudson Estuary. North River Navigator (Hudson River Sloop Clearwater) 8(9):4-5.

Kiviat, E. 1976. Directory of Hudson Estuary marsh people and literature. Currents (Hudson River Environmental Society), (Oct.):1-8.

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**COMPANIES AND ORGANIZATIONS**

**CO42 – Stop the Pipeline (cont’d)**

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Exhibit 5  
Richardson CV

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

089-S

CO42-96 cont'd	<b>David C. Richardson</b> SUNY New Paltz, Biology Department 1 Hawk Drive, New Paltz, NY phone: (845) 257-3805 e-mail: richardsond@newpaltz.edu website: http://faculty.newpaltz.edu/davidrichardson/	
	<b>Positions held</b>	
	2010 – present	Assistant Professor, Biology Department, SUNY New Paltz, New Paltz, NY
	2008 – 2009	Postdoctoral scientist, Cary Institute of Ecosystem Studies, Millbrook, NY
	2008 May – September	Postdoctoral scientist, Stroud Water Research Center, Avondale, PA
	<b>Appointments</b>	
	2010 – present	Visiting Scientist, Cary Institute of Ecosystem Studies, Millbrook, NY
	2012 – present	Research Associate, Mohonk Preserve, New Paltz, NY
	2012 – present	Visiting Researcher, Frost Valley YMCA camp, Claryville, NY
	2009 – 2010	Visiting Scholar, Dept. of Biological Sciences, Dartmouth College, Hanover, NH
	<b>Education</b>	
	2002 – 2008	Ph.D. in Stream Ecology, Marine, Estuarine, and Environmental Sciences (MEES), University of Maryland, College Park, MD. <i>Research advisors:</i> Dr. Margaret Palmer, Dr. Louis Kaplan <i>Dissertation title:</i> Transport, sources, and quality of seston in a Piedmont headwater stream.
	1998 – 2002	B.S. in Operations Research and Industrial Engineering. Cornell University, College of Engineering, Ithaca, NY.
	<b>Training</b>	
	2009 – 2010	Faculty Institutes for Reforming Science Teaching (FIRST IV). FIRST (funded by the National Science Foundation) is a national dissemination project designed to reform undergraduate science education through professional development of postdocs and to focus on learner-centered classrooms. <a href="https://www.msu.edu/~first4/">https://www.msu.edu/~first4/</a>
	2009	CUAHSI (Consortium of Universities for the Advancement of Hydrologic Sciences) Optical Sensor Workshop. University of Vermont, Burlington, VT.
	2004	Fundamentals of Ecosystem Ecology short course, Cary Institute of Ecosystem Studies, Millbrook, NY.
	2002 – 2005	Ecological Circuitry Collaboratory (ECC) – National Science Foundation sponsored program to "close the circuit" between empiricists and modelers by training a group of young scientists to recognize themselves as both. <a href="http://www.ecostudies.org/cc/index.html">http://www.ecostudies.org/cc/index.html</a>
	<b>Publications</b> (* indicates undergraduate student)	
	<i>In prep.</i>	<i>Richardson, DC, Charifson, DM*, Stern, E*, Stanson, V*, Thompson, J.</i> Regional and local environmental change on the Shawanagunk Ridge: how acid rain and fish introduction have affected biology and water chemistry in sky lakes. Aimed Submission to Freshwater Science.
	<i>In prep.</i>	<i>Bruesewitz DA, Carey, CC, Richardson DC, Weathers, KC.</i> Under ice stratification and stability dynamics of a large, deep lake revealed by high frequency data. Aimed submission:

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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CO42-96 cont'd		Limnology and Oceanography.
	<i>In review</i>	<i>Richardson, DC, Oleksy, IA*, Hollein, TH, Arscott, DB, Gibson, C, Root, S*, Abundances and macroinvertebrate community effects of a nuisance, mat-forming diatom (Didymosphenia geminata) across Catskill Mountain streams, New York. Submission to Aquatic Sciences.</i>
	<i>Submitted</i>	<i>Smiley SF, Huth PC, Thompson JE, Lemmon D, and Richardson DC. Species Phenology Changes at Mohonk Lake, NY. Submitted to Northeastern Naturalist.</i>
	2013	<i>Hoellein, TH, Bruesewitz, DA, Richardson, DC. Revisiting Odum (1956): A synthesis of ecosystem metabolism reveals drivers of primary production and respiration across streams, lakes, wetlands, and estuaries. Limnology and Oceanography 58(6): 2089-2100.</i>
	2013	<i>Richardson DC, Newbold, JD, Aufdenkampe, AK, Taylor, PG and Kaplan, LA. A method for measuring bacterial mineralization rates of suspended particulate organic carbon in stream ecosystems. Limnology and Oceanography Methods 11: 257-261.</i>
	2013	<i>Solomon, CT, Bruesewitz, DA, Richardson, DC, et al. Ecosystem respiration: Drivers of daily variability and background respiration in lakes around the globe. Limnology and Oceanography 58(3): 849-866.</i>
	2012	<i>Klug, JL, Richardson, DC, Ewing, HA, Hargreaves, BR, Samal, NR, Vachon, D, Pierson, DC, Lindsey, AM, O'Donnell, DM, Effler, SW, Westwaters, KC. Ecosystem effects of a tropical cyclone on a network of lakes in northeastern North America. Environmental Science and Technology 46(21):11693-11901. DOI:10.1021/es302063v</i>
	2010	<i>Pace, ML, Hampton, SE, Limburg, KE, Bennett, EM, Cook, EM, Davis, AE, Grove, JM, Kaneshiro, KY, LaDeau, SL, Likens, GE, McKnight, DM, Richardson, DC, and Strayer, DL. Communicating with the public: opportunities and rewards for individual ecologists. Frontiers in Ecology and the Environment 8(6):292-298.</i>
	2009	<i>Palmer, MA and Richardson, DC. Provisioning services: a focus on freshwater. In The Princeton Guide to Ecology, Levin, SA, Ed. Princeton University Press: Princeton, NJ.</i>
	2009	<i>Richardson, DC, Kaplan, LA, Newbold, JD and Aufdenkampe, AK. Temporal dynamics of seston: A recurring nighttime peak and seasonal shifts in composition in a stream ecosystem. Limnology and Oceanography 54(1):344-354.</i>
	2008	<i>Menninger, HL, Palmer, MA, Craig, LS, and Richardson, DC. Periodical cicada detritus impacts stream ecosystem function. Ecosystems 11(8):1306-1317.</i>
	2008	<i>Craig, LS, Palmer, MA, Richardson, DC, et al. Stream restoration strategies for reducing river nitrogen loads. Frontiers in Ecology and the Environment 6(10):529-538.</i>
	2008	<i>Swan, CM, Healey, B and Richardson, DC. The role of native riparian tree species in decomposition of invasive Tree of Heaven (Ailanthus altissima) leaf litter in an urban stream. Ecoscience 15(1):27-35.</i>
	<b>Other Media Publications</b> (* indicates undergraduate student)	
	2013	<i>Richardson, DC. Changes in acidity and fish in the sky lakes: Why is Lake Minnewaska turning green? Friends of the Shawangunks: Shawangunks Watch Summer 2013 issue.</i>



# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-96 cont'd	2010	Root, SM* and Richardson, DC. Rock snot growing in New York rivers. Poughkeepsie Journal. 12 Sep. 2010: 3F. Print.
	2010	Richardson, DC and Dorsi, JJ*. Ice-out records track climate change. Poughkeepsie Journal. 11 Apr. 2010: 3F-4F. Print.
	<u>Awards and Funding</u>	
	2014	Collaborative Research: Whole Ecosystem Experiments on Early Warnings for Regime Shifts to Cyanobacteria in Lakes Research Opportunity Award (ROA): Supplement Request for NSF Division of Environmental Biology #1144627, Supplement to award to Dr. Jon Cole, Cary Institute of Ecosystem Studies
	2014	Loewy-Mohonk Preserve Liaison Fellowship. Using high frequency sensors and long term data to evaluate the effect of climate change on Lake Mohonk water temperature and physical mixing.
	2014	Water Resources Research Grant, NYS Water Resources Institute. Using high frequency lake data and fish population analyses to inform management and outreach in the Sky Lakes, Shawangunk Ridge, eastern New York. Collaborators: John Thompson, Mohonk Preserve, Kathleen Weathers, Cary Institute of Ecosystem Studies.
	2014	SUNY New Paltz Provost Challenge Grant. Understanding lake ecosystem response to a changing world: a research, education, and outreach strategy to examine reversibility of environmental shifts.
	2013	Summer Undergraduate Research Experience (SURE) Award. Invasion of a minnow (Golden Shiner) in Lake Minnewaska, NY: what are they eating and how are they affecting the lake food web? Summer stipend and research funding for New Paltz undergraduate student, Erich Stern.
	2013	Summer Undergraduate Research Experience (SURE) Award. Phosphorus and nitrogen as chemical controls of the growth of the invasive river diatom, <i>Didymosphenia geminata</i> (didymo). Summer stipend and research funding for New Paltz undergraduate student, Steve Dimeglio.
	2013	Planning and Implementing Green Infrastructure to Improve Watershed Resiliency in the Saw Mill Brook Watershed and Village of New Paltz. Subcontract from NYS Water Resources Institute at Cornell University. ~\$50,000 to D.C. Richardson for water quality monitoring. Project Director: KT Tobin, Center for Research, Regional Education and Outreach at SUNY New Paltz.
	2012	Summer Undergraduate Research Experience (SURE) Award. Understanding the food web and water quality effects of the invasion of a minnow (Golden Shiner) in Lake Minnewaska, NY. Summer stipend and research funding for New Paltz undergraduate student, David Charifson.
	2011 – 2012	Ashokan Watershed Stream Management Program mini grant program. Didymo in Esopus Creek: Identification of bloom locations and dissemination of decontamination methods to citizens and scientists. Collaborators: T. Hoellein, Baruch College; D. Arscott, Stroud Water

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-96 cont'd	Research Center; Catherine Gibson, Skidmore College.
2011	Summer Undergraduate Research Experience (SURE) Award. Rock Snot (Didymo), a nuisance algae in Catskills streams: where, why, and how much? Summer stipend and research funding for New Paltz undergraduate student, Nathaniel Rigolino.
2010 – 2011	Supplemental funding to develop smart-phone applications for citizen scientists to collect and view environmental data. National Science Foundation award #OCI-0753310, "Collaborative Research: CI-Team Demonstration: Developing a Model for Engagement of Citizen Scientists: Lake Associations." Collaborators: K. Weathers, Cary Institute of Ecosystem Studies; June Fichter, Lake Sunapee Protective Association; Barbara Benson, University of Wisconsin; Ken Chiu, SUNY Binghamton; Ann Zimmerman, University of Michigan.
2010	Summer Undergraduate Research Experience (SURE) Award. Water quality of two anthropogenically affected water bodies: Lake Sunapee and the Wallkill River. Summer stipend and research funding for New Paltz undergraduate student, Steven DiFalco.
2010 – 2011	Ashokan Watershed Stream Management Program mini grant program. Rock Snot in Sick Rivers. Collaborators: T. Hoellein, Baruch College; D. Arscott, Stroud Water Research Center; Catherine Gibson, Skidmore College.
2010 – 2011	Water Resources Research Grant, NYS Water Resources Institute. Rock snot in sick rivers: What are the environmental drivers controlling blooms of the invasive diatom <i>Didymosphenia geminata</i> in the Northeastern and Mid-Atlantic United States? Collaborators: T. Hoellein, Baruch College; D. Arscott, Stroud Water Research Center; Catherine Gibson, Skidmore College.
2008 – 2011	National Science Foundation Cyberinfrastructure grant. Developing a model for engagement of citizen scientists: lake associations. Collaborators: K. Weathers, Cary Institute of Ecosystem Studies; June Fichter, Lake Sunapee Protective Association; Barbara Benson, University of Wisconsin; Ken Chiu, SUNY Binghamton; Ann Zimmerman, University of Michigan.
2008 Spring	Jacob Goldhaber travel grant (University of Maryland Graduate School)
2008	Washington Biologists' Field Club research grant: "Putting stream salamanders in context: linking stream salamander behavior, bioturbation, and the loss of small streams." Collaborator: EHC Grant, University of Maryland
2007 Summer	North American Benthological Society award for best oral presentation emphasizing methodology, Columbia, South Carolina
2007 Summer	Entomology Student Organization travel grant (University of Maryland)
2006 Fall	University of Maryland College of Chemical and Life Science Bioscience Research & Technology Review Day- Best poster in biodiversity and environmental sciences
2006 Summer	College of Life Sciences graduate travel grant (University of Maryland)
2005 – 2008	Research assistant for National Science Foundation grant: "Collaborative research: Seston

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

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CO42-96 cont'd	contributions to metabolism across longitudinal ecosystems (SCALE) - Dynamics of organic particles in river networks." Stroud Water Research Center, Avondale, Pennsylvania.
2005 Spring	North American Benthological Society President's award
	<u>Teaching Experience</u>
	<i>Current courses at SUNY New Paltz</i>
	General Biology II (BIO202): SPRING, Intro Biology for majors, topics include evolution and ecology
	Freshwater Biology (BIO440): SPRING, Local and regional stream, river, and lake ecosystems
	Biological Statistics (BIO380): FALL, Quantitative statistical analyses used in biology research
	Ecology (BIO340): FALL, Ecological theories and field experiences
	<i>Other invited lectures and teaching experience</i>
2010 January	"Restoration ecology" discussion. Fundamentals of ecosystem ecology short course, Cary Institute of Ecosystem Studies, Millbrook, NY.
2009 November	"Aquatic effects from air and water non-point source pollution: Lake Sunapee, NH" lecture. Geology 370: Environmental Geochemical Science, SUNY New Paltz, New Paltz, NY
2009 January	"Heterogeneity and ecosystem function" lecture. Fundamentals of ecosystem ecology short course, Cary Institute of Ecosystem Studies, Millbrook, NY.
2008 November	Bard College, Science of the Natural and Built Environment - guest lecturer during visit to Cary Institute of Ecosystem Studies
2008 November	SUNY New Paltz, Biology 340 - Ecology (guest lecturer/lab coordinator for aquatic ecology lab)
2005 – 2008 Summers	Stroud Water Research Center, Mentor for Research Experience for Undergraduate (REU) interns: research advising and organization of journal club
2006 Spring	University of Maryland, Biological Sciences 103 - The World of Biology (teaching assistant)
2005 August	University of Maryland, Marine, Estuarine and Environmental Sciences 698S - Ecological and geomorphic principles of stream restoration (guest lecturer)
2002 Spring	Cornell University, Operations Research and Industrial Engineering 310 - Industrial systems analysis (teaching assistant)
	<u>Presentations</u>
2014	Richardson, DC. Environmental change on the Shawangunk Ridge: how acid rain and invasive fish are affecting the Sky Lakes. Invited Seminar for the Biology Lecture Series in Memory of Dr. Donald J. Ross Sr., Fairfield University, Fairfield, CT.
2014	Brucsewitz DA, Carey, CC, Richardson DC, Weathers, KC. LSPA Water Quality buoy: scientific results and synergistic outcomes. Invited Seminar, Lake Sunapee Protective Association Board Meeting, Sunapee, NH.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-96 cont'd	2013	Richardson, DC, Townley, L. A research and management partnership to understand environmental change in the Sky Lakes. Invited Seminar, Shawangunk Ridge Biodiversity Partnership Joint Steering and Research and Management Committees meeting.
	2013	Bruesewitz DA, Carey, CC, Richardson DC, Weathers, KC. The evolution of synergistic science using Lake Sunapee buoy data: A case study of collaborative, high-frequency data analysis. Global Lake Ecological Observatory Network (GLEON) 15 meeting, Bahia Blanca, Argentina.
	2013	Richardson, DC, Charifson, DM, Stern, E, Thompson, J. Two stories about environmental change in the Sky Lakes, Shawangunk Ridge. Invited Seminar, Mohonk Preserve Conservation Science Meeting, New Paltz, NY.
	2013	Richardson, DC, Oleksy, IA, Hollein, TH, Arscott, DB, Gibson, C, Root, S, Bruesewitz DA, Carey, CC. Why are Didymo ( <i>Didymosphenia geminata</i> ) blooms spreading in New York State? A spatial survey and biogeochemical hypotheses. Invited Seminar, Virginia Tech Stream Team, Blacksburg, VA.
	2013	Smiley, SF, Cook, BI, Cook, ER, Huth, PC, Thompson, JE, and Richardson DC. Climate and species phenology changes at Mohonk Lake, New York. Northeastern Natural History Conference poster presentation, Springfield, MA.
	2013	Richardson, DC, Oleksy, IA, Hollein, TH, Arscott, DB, Gibson, C, Root, S. Spatial distribution and ecosystem effects of a nuisance, bloom-forming diatom ( <i>Didymosphenia geminata</i> ) in Catskill Mountain streams, New York. Society for Freshwater Science conference oral presentation, Jacksonville, FL.
	2013	Richardson, DC, Oleksy, IA, Hollein, TH, Arscott, DB, Gibson, C, Root, S. Spatial distribution and ecosystem effects of a nuisance, bloom-forming diatom ( <i>Didymosphenia geminata</i> ) in Catskill Mountain streams, New York. International Didymo Conference, Providence, Rhode Island.
	2012	Klug, JL, Richardson, DC, Ewing, HA, Hargreaves, BR, Samal, NR, Vachon, D, Pierson, DC, Lindsey, AM, O'Donnell, DM, Effler, SW, Weathers, KC. A regional analysis of the effects of Tropical Cyclone Irene on lake ecosystems across northeastern North America. Catskill Environmental Monitoring and Research Conference poster, Highmount, New York.
	2012	Bialowas, E. and Richardson, DC. The effect of <i>Didymosphenia geminata</i> (Didymo) on macroinvertebrate communities in Esopus Creek, NY. Catskill Environmental Monitoring and Research Conference poster, Highmount, New York.
	2012	Oleksy IA, Richardson DC, Gibson, CA, Hoellein, TJ, Arscott, DB, Achterberg, L, Bialowas, E, Handler, A, Miller, A, Redfield, M. <i>Didymosphenia geminata</i> (Rock Snot) in the New York City Watershed – factors that affect the growth, spatial distribution, and timing of the Didymo bloom in the Esopus Creek (2010-2012). Catskill Environmental Monitoring and Research Conference poster, Highmount, New York.
	2012	Miller A., Bialowas, E., Oleksy, IA, and Richardson, DC. Didymo on the Move: A Spatial Analysis of <i>Didymosphenia geminata</i> (didymo) in Catskills, New York. Catskill Environmental Monitoring and Research Conference poster, Highmount, New York.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-96 cont'd	2012	Klug, JL, <i>Richardson, DC</i> , Ewing, HA, Hargreaves, BR, Samal, NR, Vachon, D, Pierson, DC, Lindsey, AM, O'Donnell, DM, Effler, SW, Weathers, KC. A regional analysis of the effects of Tropical Cyclone Irene on lake ecosystems across northeastern North America. Global Lake Ecological Observatory Network (GLEON) meeting, Mulranny, Co. Mayo, Ireland.
	2012	<i>Richardson, DC</i> , Klug JL, Ewing HA, Hargreaves BR, Samal NR, Vachon D, Pierson DC, Lindsey AE, O'Donnell D, Effler SW, Weathers KC. A regional analysis of the physical and biological effects of Tropical Cyclone Irene on lake ecosystems across northeastern United States and eastern Canada. Ecological Society of America annual meeting oral presentation, Portland, OR.
	2012	Handler AM, Oleksy IA, <i>Richardson DC</i> , Rigolino N, Hoellein T, Arscott DB, Gibson CA. Physiochemical controls of the growth of the invasive freshwater diatom, <i>Didymosphenia geminata</i> , in Rondout Creek, New York. Ecological Society of America annual meeting poster presentation, Portland, OR.
	2012	Oleksy IA, Handler AM, Rigolino N, Arscott DB, Gibson CA, Hoellein T, <i>Richardson DC</i> . A spatial analysis of <i>Didymosphenia geminata</i> (rock snot) in the New York City watershed. Ecological Society of America annual meeting poster presentation, Portland, OR.
	2012	<i>Richardson, DC</i> , Klug JL, Ewing HA, Hargreaves BR, Samal NR, Vachon D, Pierson DC, Lindsey AE, O'Donnell D, Effler SW, Weathers KC. A regional analysis of the physical and biological effects of Tropical Cyclone Irene on lake ecosystems across northeastern United States and eastern Canada. Association for the Sciences of Limnology and Oceanography meeting oral presentation, Lake Biwa, Otsu, Japan.
	2012	Chickering, JS, Baer NA, <i>Richardson DC</i> , Ewing HA, Roebuck HJ, Weathers KC. Spatial and temporal patterns of DOC bioavailability in six streams, Sunapee, New Hampshire. Society for Freshwater Science conference oral presentation, Louisville, KY.
	2012	Hoellein, TJ, Bruesewitz DA, <i>Richardson DC</i> . Revisiting Odum (1956): A synthesis of ecosystem metabolism reveals controls on primary production & respiration across lakes, wetlands, streams, and estuaries. Society for Freshwater Science conference oral presentation, Louisville, KY.
	2011	Aufdenkampe, AK, Mayorga E, <i>Richardson DC</i> , Newbold JD, Bukaveckas PA, Angradi TR. A novel approach to quantifying algal contributions to suspended organic matter from elemental composition. American Geophysical Union, San Francisco, CA.
	2011	<i>Richardson, DC</i> , Hoellein TJ, Gibson C, Arscott DB, Root S. <i>Didymosphenia geminata</i> (didymo) in West of Hudson watersheds – with a focus on Esopus Creek. Invited talk, Stroud Water Research Center, Avondale, PA.
	2011	Weathers KC, Ewing HA, Baer NA, Chen CY, Roebuck HJ, Maki CE, <i>Richardson DC</i> , Lindsey AM, Wilson A, Chickering J, Fiorillo AU, Cottingham KL. From Air to Water: Hg deposition and biogeochemistry, Sunapee, NH watersheds. National Atmospheric Deposition Program annual meeting oral presentation, Providence, Rhode Island.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-96 cont'd	2011	Weathers, KC, <i>Richardson, DC</i> , Benson, BJ, Chiu, K, Zimmerman, A, and Fichter, J. Enhancing human passion and curiosity about lake ecosystem function: A case study of sensors, citizens, and cyberinfrastructure from Lake Sunapee, NH. Ecological Society of America conference oral presentation, Austin, Texas.
	2011	Bruesewitz, DB, <i>Richardson, DC</i> , Rose, KC, Solomon, CT, and Van de Bogert, MC. Drivers of pelagic metabolism: evidence from high frequency free-water measurements in lakes around the globe. Ecological Society of America conference oral presentation, Austin, Texas.
	2011	DiFalco, S, <i>Richardson, DC</i> . Spatial and temporal variability of water quality in an anthropogenically affected river, Wallkill River and its tributary, New Paltz, NY. North American Benthological Society conference poster presentation, Providence, RI.
	2011	<i>Richardson, DC</i> , Achterberg, LA; Redfield, MR; Root, S; Arscott, DB; Gibson, C; Hoellein, TJ. Rock snot in a sick river: <i>Didymosphenia geminata</i> (Didymo) blooms and water chemistry in Esopus Creek, Catskill Mountains, NY. What causes didymo blooms in Esopus Creek? North American Benthological Society conference poster presentation, Providence, RI.
	2011	Achterberg, LA; Redfield, MR; <i>Richardson, DC</i> ; Hoellein, TJ; Root, S; Arscott, DB; Gibson, C. Macro and micronutrient influences on <i>Didymosphenia geminata</i> (didymo) growth in the newly invaded stream, Esopus Creek, NY. North American Benthological Society conference poster presentation, Providence, RI.
	2010	<i>Richardson, DC</i> ; Achterberg, LA; Redfield, M; Root, S, Arscott, DA; Gibson, C; Hollein, TJ. Rock snot in a sick river: What causes didymo blooms in Esopus Creek? Catskill Environmental Monitoring and Research Conference poster, Highmount, New York.
	2010	Root, S; <i>Richardson, DC</i> ; and O'Reilly, C. An Assessment of Three Common Decontamination Products on the Invasive Algae <i>Didymosphenia geminata</i> . Catskill Environmental Monitoring and Research Conference invited poster, Highmount, New York.
	2010	Root, S, <i>Richardson, DC</i> and O'Reilly, C. Didymo Update: Rock Snot is Growing in New York Rivers. Cornell Cooperative Extension (Invasive Species) Invited Talk, Cornell University, Ithaca, New York.
	2010	<i>Richardson, DC</i> , Ewing, HA, Weathers, KC, and Baer, NA. Fluxes of dissolved and particulate phosphorus into a New England oligotrophic lake, Lake Sunapee, with increasing cyanobacterial blooms. North American Benthological Society and American Society of Limnology and Oceanography joint conference oral presentation, Santa Fe, New Mexico.
	2010	Baer, NA, <i>Richardson, DC</i> , Weathers, KC, Ewing, HA, and Roebuck, HJ. Seasonal trends, watershed drivers, and bioavailability of dissolved organic carbon (DOC) in tributaries of Lake Sunapee, NH. North American Benthological Society and American Society of Limnology and Oceanography joint conference poster presentation, Santa Fe, New Mexico.
	2010	Solomon, CT, Bruesewitz, DB, <i>Richardson, DC</i> , Rose, KC, and Van de Bogert, MC. Drivers of pelagic community respiration: evidence from high frequency free-water measurements in lakes around the globe. North American Benthological Society and American Society of Limnology and Oceanography joint conference oral presentation, Santa Fe, New Mexico.

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-96 cont'd	2010	<i>Richardson, DC.</i> How lakes breathe. Lake Sunapee Protective Association Board Meeting, Sunapee, NH.
	2009	<i>Richardson, DC</i> and Hoellin, TH. Rock snot and river congestion: What are the causes and consequences of blooms of <i>Didymosphenia geminata</i> ? Cornell Cooperative Extension (Invasive Species) Invited Talk, Cornell University, Ithaca, New York.
	2009	<i>Richardson, DC,</i> Benson, BJ, Chiu, K, Fichter, J, Weathers, KC, and Zimmerman, A. Engaging citizen-scientists with real-time lake data: The CI-Team web portal and you. Cyberinfrastructure Team workshop, Trout Lake Station, Boulder Junction, Wisconsin.
	2009	<i>Richardson, DC,</i> Benson, BJ, Chiu, K, Fichter, J, Weathers, KC, and Zimmerman, A. Developing a web interface to engage citizen scientists with lake sensor data. Global Lake Ecological Observatory Network (GLEON) 13 meeting, Boulder Junction, Wisconsin.
	2009	<i>Richardson, DC.</i> Lake Sunapee in real time. Lake Sunapee Protective Association summer series, Invited Talk, Sunapee, NH.
	2009	<i>Richardson, DC</i> and Grant, EHC. Contributions of crayfish and salamander activity to increases in nighttime seston concentrations in a stream ecosystem. North American Benthological Society Conference Oral Presentation, Grand Rapids, MI.
	2009	<i>Richardson, DC,</i> Weathers, KC, and Fichter, J. Communicating science with citizens and managers: a case example from Lake Sunapee, NH. Cary Conference XIII: Effective Communication of Science in Environmental Controversies. Poster presentation, Millbrook, NY.
	2008	Kaplan, LA, <i>Richardson DC,</i> Newbold, JD, and Aufdenkampe, AK. Diel Patterns of Dissolved and Particulate Organic Matter Transport in a Pennsylvania Piedmont Stream. Diurnal Cycling of Chemical Constituents in Surface Water and Related Scientific Regulatory Consideration, NJDEP, USGS, and Rutgers WRPI, Trenton, NJ.
	2008	<i>Richardson, DC.</i> Stream seston: Transport, sources, and Darwin. University of Maryland, Department of Entomology, Invited Oral Seminar, College Park, MD.
	2008	<i>Richardson, DC.</i> Biological regulation of stream particle transport. Cary Institute of Ecosystem Studies, Invited Oral Presentation, Millbrook, NY.
	2008	<i>Richardson, DC,</i> Aufdenkampe, AK, Newbold, JD, and Kaplan, LA. Modeling sources of seston, particulate organic carbon and particulate nitrogen within a stream ecosystem. North American Benthological Society Conference Oral Presentation, Salt Lake City, UT.
	2007	Grant, EHC and <i>Richardson, DC.</i> Stream drying and the salamander larvae: where do they go? Marine Estuarine and Environmental Sciences Colloquium Poster Presentation, University of Maryland, College Park, MD.
	2007	<i>Richardson, DC,</i> Newbold, JD, Aufdenkampe, AK, Taylor, PG and Kaplan, LA. A method for measuring bacterial mineralization rates of suspended particulate organic carbon in stream ecosystems. North American Benthological Society Conference Oral Presentation, Columbia, SC.
	2006	<i>Richardson, DC,</i> Kaplan, LA and Newbold, JD. Baseflow dynamics and sources of seston in a stream ecosystem: recurring nighttime peaks. Ecological Society of America

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-96 cont'd	Conference Poster, Memphis, TN.
2005	Menninger, HL, Palmer, MA, Craig, LS, Hassett, BA, <i>Richardson, DC</i> , Smith, RF. Terrestrial-aquatic linkage: The effects of periodical cicadas on stream ecosystem function. Ecological Society of America Conference Oral Presentation, Montreal, Canada.
2004	<i>Richardson, DC</i> , Kaplan, LA and Palmer, MA. Point source contributions of suspended organic matter to an agricultural watershed with intact riparian forests. Marine Estuarine and Environmental Sciences Colloquium Poster Presentation, Horn Point Laboratory, Cambridge, MD.
2004	Ewing, H; Suarez, E; St. John, M; <i>Richardson, DC</i> ; Peierls, B; Frost, C; Euskirchen, E; Brookshire, J; Lindberg, S; Weathers, K. Mercury deposition and emission to and from heterogeneous landscapes: Exploring simple models. Ecological Society of America Conference Poster, Portland, OR.
2004	Ewing, H; Weathers, K; Brookshire, J; Euskirchen, E; Frost, C; Peierls, B; <i>Richardson, DC</i> ; St. John, M; Suarez, E; Groffman, P. Learning to model and learning to collaborate: An experiment in graduate education. Ecological Society of America Conference Poster, Portland, OR.
2004	Swan, CM; <i>Richardson, DC</i> ; Palmer, MA. A simulation study of detritivore foraging on speciose leaf litter: implications for the diversity-function relationship in stream ecosystems. Ecological Society of America Conference Oral Presentation, Portland, OR.
<b><u>Committees and Service</u></b>	
2013 – present	Technical Center for Aquatic Nuisance Species (TCANS) Principal Investigator
2013	Session moderator for 'T18 Invasive Species', Society for Freshwater Science annual meeting, Jacksonville, FL.
2012 – present	Mohonk Preserve Daniel Smiley Research Center Research Committee
2010	Session moderator, Catskill Environmental Monitoring and Research Conference, Highmount, New York.
2010	Special session organizer and moderator, North American Benthological Society and American Society of Limnology and Oceanography joint conference, Santa Fe, New Mexico
2010	Science commentator, "GREEN: art with the earth in mind" exhibit, Annmarie Garden Sculpture Park & Arts Center, Solomons, Maryland
2010	Ulster Counselors Career Conference "Science" panelist, March 11
2009 – 2010	Young Environmental Scientists (YES) conference evaluator
2009 – 2011	Lake Sunapee Protective Association Science Advisory Committee
2007 – 2008	Green Science at Stroud (GSAS) committee member, Stroud Water Research Center, Avondale, PA.
2007 – 2008	Marine, Estuarine and Environmental Sciences Graduate Student Organization representative to the University of Maryland Graduate Student Government



# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-96 cont'd	2005 – 2006	Department of Entomology website committee, University of Maryland, College Park, Maryland
	2005 – 2008	Palmer lab website webmaster
	<b>Professional Affiliations</b>	
	2002 – present	Society for Freshwater Science (formerly North American Benthological Society); Ecological Society of America
	2008 – present	Global Lake Ecological Observatory Network (GLEON)
	<b>Reviewing Activity</b>	
	-Freshwater Biology (2013)	
	-United States Geological Survey Technical review (2013)	
	-Acta Oecologia (2012)	
	-Biogeochemistry (2010)	
	-National Science Foundation, Ecosystem Science Cluster (2009, 2010)	
	-Methods in Stream Ecology, 2 <sup>nd</sup> edition, 2006, Hauer, R. and Lamberti, G.A.	
	-Journal of Geophysical Research (with Newbold, J.D.)	
	-Limnology and Oceanography (with Palmer, M.A.)	
	<b>Research mentoring</b>	
	2013 Summer	<i>Erich Stern</i> (SUNY New Paltz) – Student Undergraduate Research Experience (SURE) at SUNY New Paltz <i>David Charifson</i> (SUNY New Paltz) – Research Technician <i>Valerie Stanson</i> (SUNY New Paltz) – Summer volunteer <i>Caitlyn Maceli</i> (SUNY New Paltz) – Campus water quality project summer intern at SUNY New Paltz <i>Alexander LeTourneau</i> (SUNY New Paltz) – Campus water quality project summer intern at SUNY New Paltz <i>Steven Dimaglio</i> (SUNY New Paltz) – Student Undergraduate Research Experience (SURE) at SUNY New Paltz
	2012 Summer	<i>Emily Bialowas</i> (Cornell University) – Research Experience for Undergraduates at SUNY New Paltz <i>Andrea Miller</i> (Unity College) – Research Experience for Undergraduates at SUNY New Paltz <i>David Charifson</i> (SUNY New Paltz) – Student Undergraduate Research Experience (SURE) at SUNY New Paltz <i>Isabella Oleky</i> – Research Technician <i>Erich Stern</i> (SUNY New Paltz) – Summer volunteer
	2011 Summer	<i>Nathaniel Rigolino</i> (SUNY New Paltz) – Student Undergraduate Research Experience (SURE) at SUNY New Paltz <i>Amalia Handler</i> (Franklin and Marshall College) – Research Experience for Undergraduates at SUNY New Paltz <i>Isabella Oleky</i> (University of New Hampshire) – Research Experience for Undergraduates at SUNY New Paltz
	2010 Summer	<i>Laura Achterberg</i> (University of Nebraska, Lincoln) - Research Experience for Undergraduates at SUNY New Paltz <i>Molly Redfield</i> (Mount Holyoke College) - Research Experience for Undergraduates at SUNY New Paltz <i>Samantha Root</i> (Bard College) – Didymo project summer intern at SUNY New Paltz <i>Stephen DiFalco</i> (SUNY New Paltz) – Student Undergraduate Research Experience (SURE) at SUNY New Paltz
	2009 Summer	<i>Teriko MacConnell</i> (Newport Elementary School, New Hampshire) – Research Experience for Teachers at Cary Institute of Ecosystem Studies <i>Nathan Camp</i> (Kearsarge Regional Middle School, New Hampshire) – Research Experience for Teachers at Cary Institute of Ecosystem Studies
	2008 Summer	<i>Laura Fox</i> (Indiana University-Purdue University Indianapolis) - Research assistant at Stroud Water

COMPANIES AND ORGANIZATIONS

CO42 – Stop the Pipeline (cont’d)

CO42-96 cont'd	Research Center Hanh Nguyen (Dartmouth College) - Research Experience for Undergraduates at Stroud Water Research Center Laura Regester (Trinity University, DC) - Research Experience for Undergraduates at Stroud Water Research Center 2007 Summer Jaclyn McIlwain (University of Delaware) - Research Experience for Undergraduates at Stroud Water Research Center Maddie Winters (Guilford College) - Research assistant at Stroud Water Research Center
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**COMPANIES AND ORGANIZATIONS**

**CO42 – Stop the Pipeline (cont’d)**

CO42-96  
cont'd

Exhibit 6  
Clean Water Act  
Violation

S-692

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)



DEPARTMENT OF THE ARMY  
US Army Corps of Engineers, ATTN: CENAN-OP-RU  
Upstate Regulatory Field Office  
1 Buffington St., Bldg 10, 3<sup>rd</sup> Fl. North  
Watervliet, New York 12183-4000

REPLY TO  
ATTENTION OF

Upstate New York Section

SEP 11 2013

CO42-96  
cont'd

Subject: Application No. NAN-2012-00449-UCA  
Constitution Pipeline Company, LLC  
Operated by Williams Gas Pipeline Company, LLC  
Violation near Milepost 54 and 55  
Town of Sidney, Delaware County, New York

Mr. Timothy Powell  
Constitution Pipeline Company, LLC  
2800 Post Oak Road Boulevard (77056)  
PO Box 1396  
Houston, TX 77251-1396

Dear Mr. Powell:

On August 27, 2013, a representative of this office conducted an inspection of a project site on a section of the proposed Constitution Pipeline in the vicinity of wetlands DE-1K-W228 (PEM), DE-1F-W075 (PFO and PEM) and the perennial stream DE-1M-S075. These wetlands and stream are located on a New York State Electric and Gas power transmission line right of way, located on the north side of Parker Hollow Road, in the Town of Sidney, Delaware County, New York. During the course of the inspection it was noted that fill had been placed in such a manner that it was allowed to enter into waters of the United States, without prior authorization from this office. Such impacts are considered in violation of the statutes and regulations within the jurisdiction of this office.

These statutes and regulations include the Clean Water Act (specifically Title 33 of the United States Code, Section 1311, which prohibits unauthorized discharges to the waters of the United States, and Section 1344, which sets out the manner in which such discharges of dredged or fill material may be authorized), and the regulations promulgated pursuant thereto (Title 33 of the Code of Federal Regulations, Section 320 through 332).

This office is in receipt of your correspondence dated September 5, 2013, which included a proposal to repair the impacts to the wetlands and waterbody at the subject site. The restoration areas are shown on the drawings entitled "Constitution Pipeline – U.S. Army Corps of Engineers – Wetland Restoration Plan", Figures 1-3, undated, prepared by AECOM. Based on a review of the submittals, this office has determined that carrying out the proposed plan to restore 0.41 acres and 42 linear feet of aquatic resources would adequately address the current violation. Therefore, in accordance with Title 33 of the Code of Federal Regulations, Section 326.3(d)(1), the Williams Company is hereby **Ordered** to carry out the proposed remedial measures by **October 15, 2013**. The project is to include a qualified onsite environmental monitor during the wetland/stream restoration activities to ensure that the aquatic resources are reestablished properly.

S-693

# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-96  
cont'd

Subject: Application No. NAN-2012-00449-UCA  
Constitution Pipeline Company, LLC  
Operated by Williams Gas Pipeline Company, LLC  
Violation near Milepost 54 and 55  
Town of Sidney, Delaware County, New York

Annual monitoring reports are to be submitted to this office by October 31 for a minimum of 3 years following completion of the restoration activity to ensure the aquatic resource has been adequately restored. This office will consider the aquatic resources restored when the following Restoration Requirements have been met:

### Restoration Requirements

- A. You shall ensure that the restored wetlands (0.41 acres) meet the federal wetland technical guidance and indicators outlined in the following documents (or current versions): U.S. Army Corps of Engineers, 2011, *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*, ed. J.S. Wakeley, R.W. Lichvar, C.V. Noble, and J. F. Berkowitz, ERDC/EL TR-12-1, Vicksburg, MS; U.S. Army Engineer Research and Development Center, and Environmental Laboratory, 1987, *Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1*, US Army Engineer Waterways Experiment Station, Vicksburg, MS.
- B. You shall ensure that all proposed plantings in the restoration area shall have an eighty-five (85) percent survival rate and all restored wetland areas in conjunction with the restoration shall have an eighty-five (85) percent coverage rate of hydrophytic plants (those with a regional indicator status of FAC, FACW, or OBL in the report entitled "Robert W. Lichvar and John T. Kartesz, 2009. North American Digital Flora: National Wetland Plant List, version 2.4.0 ([https://wetland\\_plants.usace.army.mil](https://wetland_plants.usace.army.mil))). U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH, and BONAP, Chapel Hill, NC.", or current approved wetland plant list. In addition, the permittee shall ensure that the vegetation in the established wetlands, the restored wetlands and enhanced riparian area do not consist of more than a total of 5% areal coverage of common reed (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*), reed canary grass (*Phalaris arundinacea*), Japanese knotweed (*Polygonum cuspidatum*), Tartarian honeysuckle (*Lonicera tartarica*), Eurasian milfoil (*Myriophyllum spicatum*), and/or other invasive species.
- C. You shall ensure that the 42 linear feet of stream restoration is completed with the bed and bank of the watercourse in a stable configuration. The stream bottom material shall be of a similar sized and type of material that is in the immediate vicinity of the impact area and all elevations shall be returned to preconstruction levels and conditions.

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# COMPANIES AND ORGANIZATIONS

## CO42 – Stop the Pipeline (cont'd)

CO42-96  
cont'd

Subject: Application No. NAN-2012-00449-UCA  
Constitution Pipeline Company, LLC  
Operated by Williams Gas Pipeline Company, LLC  
Violation near Milepost 54 and 55  
Town of Sidney, Delaware County, New York

- D. All grading, seeding and planting in conjunction with the wetland and stream restoration work shall be completed prior to October 15, 2013.
- E. You shall ensure that all synthetic erosion control or other fencing or matting materials, which are proposed for temporary use during restoration activities, are completely removed and properly disposed of after their initial purpose has been served. Only natural fiber materials, which will degrade after time, may be used as permanent measures, or if used temporarily, may be abandoned in place.

Proper sediment and erosion controls are to be installed and properly maintained until the restored areas are fully vegetated. All remaining wetlands and waterbodies within the work areas will be fenced off with orange construction fence as a visual barrier to prevent contractors from entering sensitive areas. Any excess material not used for restoration activities shall be removed to an upland disposal area and stabilized.

On the last page of the September 5, 2013 letter, you also discussed future impacts to wetlands and waterbodies for staging area that would be required for the horizontal directional drill (HDD) that is proposed for the proposed pipeline. As you know, this office is currently reviewing the permit application for the Constitution Pipeline. The proposed impacts associated with the pipeline including staging areas and access roads associated with HDD impacts should be included with those application materials, if they have not been included already.

This office is to be kept apprised of the progress toward implementation of the restoration plan and contacted for a follow-up inspection when restoration is complete.

This letter does not obviate the need to obtain any other federal, state or local permits that may be required for the project.

S-695

COMPANIES AND ORGANIZATIONS

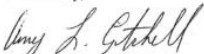
CO42 – Stop the Pipeline (cont’d)

CO42-96  
cont'd

Subject: Application No. NAN-2012-00449-UCA  
Constitution Pipeline Company, LLC  
Operated by Williams Gas Pipeline Company, LLC  
Violation near Milepost 54 and 55  
Town of Sidney, Delaware County, New York

Your cooperation with the regulatory requirements of this office is appreciated. If any questions should arise concerning this matter, please contact Mr. George Casey of my staff at (518) 266-6361.

Sincerely,



Amy L. Gitchell  
Chief, Upstate New York Section


c: Buffalo District (H. Keppner)  
Baltimore District (W. Chandler)  
CENAN-OP-RU (K. Bruce)  
CENAN-OC (J. Palmer)  
FERC (K. Bowman)  
NYSDEC-HQ  
Town of Sidney  
USFWS  
USEPA

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COMPANIES AND ORGANIZATIONS

CO43 – Hudson Highlands Environmental Consulting

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April 7, 2014

Ms. Kimberly D. Bose, Secretary

Federal Energy Regulatory Commission

Washington DC 20426

RE: Constitution Pipeline Project DEIS

Docket No. CP13-499-000

Dear Ms. Bose:

CO43-1

I represent The Henry S. Kernan Land Trust (Trust), which manages protected land that would be impacted by a full mile of the proposed Constitution Pipeline (CP) that would cross the land. I have been requested by the Trust to review the Draft Environmental Impact Statement (DEIS) for the referenced project. As is detailed in many places throughout this letter, I was unable to adequately perform this task. Time and time again, I found the DEIS missing information, or presenting information in such a cryptic or incomprehensive way that made it impossible for me to conduct a meaningful analysis. The following comments should go to the merits of the project, and how they impact my clients and their very unique property, but they are incomplete because the DEIS is incomplete. With these comments, I am providing what I can to meet the deadline, but I reserve the right to supplement these comments to respond to any supplemental filings or issues that are uncovered later on.

CO43-2

**A. DEIS is incomplete**

Comment A-1:  
As I explain in more detail in a separate letter dated March 24, 2014, it is my fervent professional opinion that the DEIS seriously fails to meet the standards required under federal law. CEQ regulations governing the preparation of environmental impact statements state *"The draft statement must fulfill and satisfy to the fullest extent possible the requirements established for final statements in section 102(2)(C) of the Act. If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion. The agency shall make every effort to disclose and discuss at appropriate points in the draft statement all major points of view on the environmental impacts of the alternatives including the proposed action."* (40 CFR Part 1502.9 (a))  
  
As detailed in my March 24<sup>th</sup> letter, these deficiencies take the form of missing information, much of which is acknowledged by FERC in its own requests for additional information, as well as structural deficiencies that preclude the reader from locating information that purportedly exists elsewhere in the docket. These deficiencies have prevented me from being able to conduct a meaningful analysis of the DEIS on behalf of my clients, most notably in areas that directly impact their property. I incorporate all the points and comments made in that letter into this review by reference.

CO43-1      The commentor’s statements regarding the draft EIS are noted.

CO43-2      See the response to comment FA1-1 regarding pending information.

S-697

Companies and Organizations Comments



# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

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Ms. Kimberly D. Bose  
April 7, 2014

### B. Introduction

CO43-3

Comment B-1: (Page 1, Paragraph 5 & Footnote #3)  
The DEIS notes that the New York State Department of Agriculture and Markets (NYSDAM) participated as a cooperating agency in the preparation of the EIS. Footnote #3 defines a "cooperating agency" as one that "has jurisdiction by law or special expertise with respect to environmental impacts involved with the proposal and is involved in the NEPA analysis." While both the Pennsylvania DEP and the New York State DEC may have consciously chosen to not assume official status as cooperating agencies, both are agencies that would have to issue permits for the proposed project, and clearly, both have "special expertise with respect to environmental impacts," an expertise that is arguably far greater than NYSDAM. Were these agencies consulted for this expertise during preparation of the DEIS? It is notable that now one of these agencies, the NYSDEC, has in fact submitted a letter stating that the DEIS is incomplete. The DEIS would undoubtedly been a more useful and understandable document had these two agencies been involved.

CO43-4

Comment B-2: (Page 1-1,1-2, Project Purpose and Need)  
*"While this EIS will briefly discuss the Applicants' purpose, it will not determine whether the need for the projects exists, as this will later be determined by the Commission."*  
How can the DEIS possibly defer the description of project need to some undefined point after the NEPA process may have already been closed? This is a complete violation of the NEPA process and CEQ regulations governing the preparation of environmental impact statements. CEQ regulations require that a DEIS "specify the underlying Purpose-and-Need to which the agency is responding in proposing the alternatives, including the proposed action." (40 CFR 1502.13)." These regulations do not provide an option by which the description of project need may be deferred.

This is a fundamental component of the NEPA process. Without even my own words, I need only quote from the website of the Federal Highway Authority (FHWA), one of the federal agencies cited as participating in the preparation of this DEIS:

*"The statement of the project purpose and need is the core component of the NEPA document. It describes the impetus for the project and serves as the benchmark against which project alternatives are evaluated."* ([http://environment.fhwa.dot.gov/projdev/pd6rs\\_primer\\_sec5.asp](http://environment.fhwa.dot.gov/projdev/pd6rs_primer_sec5.asp))

In this instructive primer, the FHWA continues on the importance of describing project need thusly:

*"This section should clearly demonstrate that a 'need' exists and should define the 'need' in terms understandable to the general public. This discussion should clearly describe the problems which the proposed action is to correct. It will form the basis for the 'no action' discussion in the 'Alternatives' section, and assist with the identification of reasonable alternatives and the selection of the preferred alternative."*

How can two federal agencies view the same federal legal requirement in two very different ways and both be right? They obviously can't. The FHWA is correct. The proposed action would utilize government-granted eminent domain to take land away from hundreds of private property owners and impact thousands of acres of unspoiled forest, wetlands, and agricultural

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Page 2

CO43-3

The FERC invited both the PADEP and the NYSDEC to participate in the development of the EIS as cooperating agencies in August 2012 ([http://elibrary.ferc.gov/0/idmws/file\\_list.asp?document\\_id=14048039](http://elibrary.ferc.gov/0/idmws/file_list.asp?document_id=14048039) and [http://elibrary.ferc.gov/0/idmws/file\\_list.asp?document\\_id=14048033](http://elibrary.ferc.gov/0/idmws/file_list.asp?document_id=14048033)). Neither agency opted to participated formally as a cooperating agency; however, both participated in bi-weekly conference calls between the FERC, regulatory agencies, and the Applicants during the pre-filing period.

CO43-4

See the response to comment LA7-5. Further, the purpose and need approach for agencies will vary for a number of reasons; for example, a resource or land managing agency may propose its own projects, or oversee projects sponsored by federal funding. This is very different from a regulatory agency responding to proposals for private sector project sponsors. As discussed in our response to comment LA7-5, a FERC EIS presents the applicant's stated purpose for a project but does not attempt to justify or defend it. Only the FERC Commission can ultimately decide whether a project is needed (e.g., in the public convenience and necessity).

869-S

COMPANIES AND ORGANIZATIONS  
CO43 – Hudson Highlands Environmental Consulting (cont'd)

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Ms. Kimberly D. Bose April 7, 2014	
CO43-4 cont'd	<p>land over the length of more than 124 miles in two states. Why would FERC even consider such an extreme action <i>unless</i> an important public need for the project has first been determined? The desires and profit concerns of a private company, even one which would provide a utility, may define a project purpose, but it can not define a project need so gravely important that it can justify the consideration of the governmental taking of private property. Once a public need for the project is defined, then and only then can FERC as an approving agency begin to decide whether the public need for the project is so great, and would be satisfied by the proposed action, that the project benefits justify the combined governmental taking of private land and resulting environmental impacts that would occur. As noted by FHWA, it also provides the only basis by which alternatives to the proposed action can be evaluated.</p> <p>The description of project need therefore can not be deferred. This omission constitutes a fundamental, fatal flaw in this DEIS.</p>
CO43-5	<p>Comment B-3: (Page 1-11, 1.4 Non-Jurisdictional Facilities) The DEIS provides here what is probably the most accurate description of the purpose for the project:</p> <p><i>"The development of the Marcellus Shale, which is regulated by the states, continues to drive the need for takeaway interstate pipeline capacity to allow the gas to reach markets. Therefore, companies are planning and building interstate transmission facilities in response to this new source of gas supply."</i></p> <p>Simply put, the growth of the natural gas industry in Pennsylvania has created an industry need to find ways to transport it to market. That is the purpose of this proposed action. Describing the project purpose with such descriptions as to <i>"provide new natural gas service for areas currently without access to natural gas,"</i> or <i>"optimize the existing systems for the benefit of both current and new customers by creating a more competitive market, resulting in enhanced market competition, reduced price volatility, and lower prices,"</i> and the others listed in the DEIS under "Project Purpose" sound like something that was generated by Constitution's marketing department as a way of casting their industry need in ways that make it sound justifiable as a public need. The bottom line, however, is that this is an industry with a product to sell, and it wants to find the most economical, most efficient means to transport that product to a market where it can be sold at a profit. Before FERC approves the government sanctioned taking of private property and the unmitigatable destruction of farmland, forests, and wetlands, it must demonstrate that there is a true public need that can not be met in any other reasonable way, and not just an accommodation to a private industry.</p> <p>Comment B-4: (Page 1-11, 1.4 Non-Jurisdictional Facilities) The statement quoted above also brightly illustrates another point. While the discussion on this page argues that the environmental impact of individual production facilities in Pennsylvania was assessed by the PADEP and other agencies, it is obvious that these assessments failed to consider the impact of creating a system of transporting the natural gas to market, at least in how it might affect properties in neighboring New York State. Yet, this was an impact that was entirely foreseeable, as reflected in the DEIS statement quoted above.</p> <p>In similar fashion, this DEIS distances itself from consideration of "non-jurisdictional facilities" that are not interstate in nature, and neglects to consider the growth-inducing impacts of the</p> <p><i>Hudson Highlands Environmental Consulting 71 Colonial Avenue, Warwick, NY 10990 (845) 986-5350</i></p> <p>Page 3</p>

CO43-5

See the response to comments LA7-5, CO42-7, and CO42-41 regarding the need of the proposed projects. See the response to comment CO26-11 regarding induced development. See the response to comment FA4-46 regarding the Leatherstocking project.

# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

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proposed pipeline. Once in place, it will likely spur additional development of fracking operations in Pennsylvania, which will themselves create additional impacts. By providing infrastructure already in place in areas of Marcellus and Utica shale in New York, it would also increase pressure on the State of New York to permit fracking in that state. Constitution has also disclosed that it plans to provide gas supplies to areas in New York along its proposed route. What growth-inducing impact might this have upon currently undeveloped areas in New York? None of this has been considered in the DEIS.

### CO43-6 C. Project Description

Comment C-1: (Page 2-1, 2.1.1. Pipeline Facilities)

"The pipeline route generally follows a greenfield (i.e., lands and vegetation, including adjacent areas, that are undisturbed or undeveloped) pathway from northeastern Pennsylvania to south-central New York."

This is an illustrative statement that appears early on in the DEIS. It clearly demonstrates the most basic fundamental flaw with the proposed route. While many existing easements and rights-of-way exist paralleling the proposed 124-mile pipeline route, as correctly noted in this statement, the "preferred route" instead follows a "greenfield pathway." This is contrary to all current guidance coming out of FERC as well as federal and state environmental protection agencies. As a result, this proposed pipeline will have an unnecessarily amplified impact upon both natural resources and the taking of private property than if it followed established guidelines for collocation. It does not appear that the consideration of alternative routes that would avoid greenfields were seriously pursued by Constitution.

### CO43-7 Comment C-2: (Page 2-6, 2.2 Land Requirements)

The DEIS notes that 1,849.5 acres of land would be disturbed for the project, but that the majority, 1105.2 acres, would be "restored and allowed to revert to its former use." In some cases, this is a disingenuous statement. Agricultural soils that are compacted, or where the soil horizon may be mixed, will be permanently disturbed. Agricultural production is dependent on soil formation, which has occurred over thousands of years, and can not be adequately replicated or "restored". Part of the characteristics of agricultural soils is the amount of pore space that allows the transfer of both water and soil gases critical to agricultural production. The pore spaces that exist below the top tillable layer are the result of the thousands of years of soil formation, which also include zoological activity. Once compressed by heavy equipment, it again can not be adequately restored.

### CO43-8 Comment C-3: (Page 2-6, 2.2 Land Requirements)

In addition, the DEIS fails to consider that the reversion to "its former use" may in fact be only temporary. As guidelines for the location of utilities encourage collocation, the DEIS must recognize that once this easement is established, it will become the focus of location for other utilities in the future. These may include other pipelines, as well as telephone, cable, fiberoptics, electricity, etc. There is therefore a reasonable likelihood that the establishment of the easement by this project will directly result in future disturbances on the very land that the DEIS now claims will revert to its "former use." As the future use of the easement by other parties could not occur without Constitution establishing the easement in the first place, the impact of the future development of this easement by other users, including the potential disturbance of the entire 1,849.5 acres and the potential that the easement could be widened to accommodate other users, needs to be acknowledged and assessed in this DEIS.

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CO43-6 See the response to comment CO2-1. As discussed in sections 3.2 and 3.3 of the EIS, we evaluated multiple options for system and major collocated alternatives that would largely eliminate the need for greenfield construction.

CO43-7 See the response to comment CO41-38. As stated in section 4.2.4 of the EIS, Constitution would employ topsoil segregation techniques and prevent the mixing of topsoil with subsoil and/or rock in agricultural areas. Soil identified as being compacted would be mitigated in two phases. In the first phase the contractor would deep rip and rock pick the subsoil with a deep tillage device. Stones that are larger than 4 inches would be removed from the subsoil area being ripped. The second phase following topsoil replacement would employ a paratill to loosen the soil to a depth of 20 to 22 inches. Additionally, Constitution would conduct compaction tests and till compacted subsurface soils in agricultural and residential areas through the use of paratills or similar equipment as identified in the ECPs. In addition, Constitution would employ agricultural inspectors to monitor each part of construction within agricultural areas. Constitution would monitor restoration of vegetation/crops for 2 years following the initial in-service date (if approved).

CO43-8 See the response to comment CO2-1. We support the collocation of pipelines with existing utilities where practical and recognize the value of collocation in regard to environmental resources. However, it is not always practical or feasible to collocate with an existing utility. In addition, our general support of collocation does not necessarily mean that another utility would be collocated with the proposed projects.

No other applicant has entered the FERC's pre-filing process for a different project that would be collocated with the Constitution pipeline. However, we are aware that TGP is in the early stages of evaluating a separate project that if proposed may be collocated with the Constitution pipeline. We have added a discussion of this project in sections 3 and 4.13 of the EIS.

# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

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CO43-8  
cont'd

Comment C-4: (Page 2-7, 2.2.1.1 Adjacent Existing Rights-of-Way and Utility Crossings)  
Federal guidelines encourage collocation with existing easements and ROWs. Yet, the DEIS acknowledges that only 11.2 miles, or approximately 9% of the 124.4-mile pipeline can be considered to be collocated. Given this small percentage, this would appear to be a failed attempt at meeting this guideline.

Comment C-5: (Page 2-8, 2-9, Table 2.2.1-1 Summary of Pipeline Collocated With Existing Rights-of-Way)  
This table even more clearly demonstrates that there was no true attempt at collocation of the pipeline route. With one exception at 3.3 miles, another at just more than 1.0 mile, and another at 0.9 mile, the remaining 34 "collocations" are no more than ½ mile each, and most considerably less. Eighteen of these are below 500 feet, with one being only 53 feet. Further, the table reveals that the pipeline itself will not be collocated within the existing easements at all. Rather it will parallel these short segments of easements, with a grand total of about just ½ mile of the pipeline "operationally" occupying about a 25-foot width of existing easement. Therefore, only 0.5 mile of the 124.4 pipeline, or about 0.4 %, will actually be collocated within an existing easement, leaving 99.6% located within greenfields.

CO43-9

Comment C-6: (Page 2-10, 2.2.1.2 Right-of-Way Configurations)  
The DEIS notes here, *"Where the HDD or Direct Pipe method is employed in uplands or wetlands, there would be no actual construction right-of-way between the HDD entry and exit workspaces, and no clearing, trenching or other disturbance of the ground other than site-specific workspaces associated with placing the HDD guide wires via foot traffic and minor hand clearing."* The utilization of these methods is being limited to wetland and stream crossings, but it seems it can be applied elsewhere as well, such as to preserve an unfragmented forest. In any communication with the Kernan Trust, Constitution has never raised the possibility of using this method, despite the fact that it could potentially eliminate the concerns held by the Trust in regard to disturbance of the unfragmented Charlotte Forest, disturbance of wetlands, the introduction of invasive species, and the destruction of a critical part of the Kernan logging operation. The DEIS should address if using the Direct Pipe method is a plausible alternative that can be used to avoid identified impacts in the area of the Charlotte Forest.

Comment C-7: (Page 2-31, 2.5.5 Post Construction Monitoring)  
Once a cleared easement has been inserted through the Charlotte Forest, which is now a prime example of an unfragmented forest as highlighted every 10 years since 1956 in the NYSDEC "Conservation" magazine, it will act as a highway for non-native invasive species to infect the property and take hold. As long as the easement is maintained in a non-forested state, the threat of an influx of aggressive non-native invasive species will be significant. No short term monitoring program will be effective, and even then, once an invasive species takes root, it may prove essentially impossible to eradicate. The proposed controls as discussed in the DEIS are not adequate.

### D. Alternatives

CO43-10

Comment D-1: (Page 3-1)  
The discussion notes that the only alternatives considered were those that met the project objectives, as described above on the same page. The description provided comes from Constitution Pipeline. Normally, I would agree that only the project sponsor's description of

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CO43-9

The FERC issued an environmental information request to Constitution on May 14, 2014 regarding the possibility of an HDD at the subject property. See section 3.4.3 of the EIS for additional assessment and updated information for this parcel. We note that the Kernan Trust has denied survey access on the property, which includes geotechnical investigations for an HDD.

CO43-10

See the response to comments LA7-5 and CO42-41.

# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

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CO43-10  
cont'd

project objectives should be considered. However, where the threat of government sanctioned eminent domain is involved, the aspect of public need must be given stronger consideration. The agency charged with performing the environmental assessment must therefore determine public need for the project at a much earlier stage, and expand consideration of alternatives to include those that would satisfy both the public need and an industry need, while not necessarily meeting all of the project sponsor's stated objectives. This may include considering a pipeline route that might transport the gas in a completely different direction to a different market, coordinating gas delivery using a pipeline owned by a competing company, or some other solution that would still achieve the goal, as stated in the Introduction, to satisfy the need for "capacity to allow the gas to reach markets." That is the bottom line, and there may be alternatives available that would significantly reduce both environmental impact and the taking of private property.

CO43-11

Comment D-2: (Page 3-2)  
*"The following sections discuss and analyze each of the alternatives evaluated in sufficient detail to explain why they were eliminated from further consideration or are recommended for adoption into the respective project."*  
As will be discussed in comments to follow, this is a completely false statement, especially in regard to the analysis of alternatives to avoid impacts on sensitive resources within and near the Charlotte Forest. The lack of detail and any explanation of analysis has effectively precluded any meaningful analysis and the ability to provide comment on same.

CO43-12

Comment D-3: (Page 3-2)  
*"Where environmental data are presented within this alternatives analysis, it is data collected from desktop (e.g., maps, literature, aerial photography, and agency databases) sources. Constitution collected field survey data for its proposed route and some (but not all) alternatives. Therefore, to present the most consistent comparisons of potential impacts on environmental resources this section presents data obtained from desktop sources for both the proposed route and alternative routes, even when field data may exist."*  
As will be discussed in more detail in comments to follow, the results of the desktop analyses clearly demonstrate their inadequacy. Again, hundreds of property owners are being threatened with eminent domain to have their property taken from them, and the scale of potential adverse impacts along the 124.4-mile greenfield route is great. Accordingly, where a desktop analysis results in only disclosing as little as 10% of what was determined by field data (see comments to follow), it is essential that a more accurate method of collecting and presenting environmental data be developed in order to provide meaningful analysis.

Comment D-4: (Page 3-2, 3.1 No-Action Alternative)  
*"The Commission has two courses of action in processing applications under Section 7 of the NGA: 1) deny the requested action (the no-action alternative), or 2) grant the Certificate, with or without conditions."*  
While this simplistic statement is technically true under the Natural Gas Act that was passed in 1938 and modified in 1942, it essentially ignores the process of environmental review established in 1970 under NEPA, which is being utilized here. Under NEPA, FERC is required to consider alternatives to satisfy the identified needs that presumably require the proposed action. If a better alternative is found, the application could be denied with clear direction and understanding that an alternative scheme would be met with approval. Therefore, NEPA provides a tool that effectively gives FERC the ability to modify an application as needed.

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CO43-11 See the response to comment CO4-2.

CO43-12 The commentator's statements regarding the need for field survey of alternative routes is noted. Typically, field surveys are not conducted for alternative routes unless they are identified as exhibiting a strong potential to be preferable to the proposed route based on desktop information.

S-702

# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

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- CO43-13 Comment D-4: (Page 3-15, 3.2.2 Status of Existing Pipeline Systems)  
The DEIS notes that all the existing pipeline systems in the NY/PA region are operating at or near capacity, and therefore could not accommodate the volume of natural gas that would be carried by Constitution. Given the growth of natural gas production in the region and beyond, it would seem that the fact that these systems are at or near capacity may be problematic on their own even without the addition of Constitution. It is more than possible that the owners of these pipelines may at some point in the near future be seeking to upgrade their lines to gain additional capacity. If so, it may be possible to incorporate the volume of gas that would be carried by Constitution into this expansion. Have the companies involved been surveyed as to their long range planning? Has any thought been given to the idea that rather than collocating, Constitution could instead work with these companies jointly to upgrade the existing lines for everyone's benefit?
- CO43-14 Comment D-5: (Page 3-19 – 3-24, 3.3 Collocation With Existing Pipeline Systems)  
All the collocation alternatives are following the stated project purpose of terminating the proposed pipeline at the existing Wright Compressor Station. However, is this necessary to the overall goal of reaching the New York and New England markets? None of the alternatives analyzed consider an easterly route along either TGP 300 or Millennium to New York City, and then north along Algonquin into New England. This seems like a reasonable alternative. Why wasn't it considered? Can it work?
- CO43-15 Comment D-6: (Page 3-30, 3.4.1.2 Alternative M)  
The DEIS states that Alternative M was developed to evaluate the possibility of collocating the proposed pipeline with Interstate 88 to reduce the need for disturbance in greenfield areas. However, the designed route diverges from the I-88 corridor so significantly into greenfield areas that it fails to achieve the stated purpose. Collocating with I-88 to avoid greenfield areas makes total sense, and the DEIS should indeed consider an alternative that truly achieves that. It appears that the Alternative M analysis only considered installation within either the medium or within the controlled access area adjacent to the traveled way. However, DOT guidelines allow for a pipeline to be placed under the pavement at a depth of 60 inches. Alternative M seems to avoid consideration of that type of installation, which then causes the route to encounter sensitive greenfield areas and sideslope construction. In the end, these are cited as reasons to dismiss Alternative M as being viable. Instead, the alternative should be designed as intended – truly collocated with I-88 – and then evaluate the issues associated with that construction in fairly assessing the viability of what would be an actual collocation alternative.
- CO43-16 Comment D-7: (Page 3-31, 3.4.1.2 Alternative M)  
*"The NYSDOT stated that the proposed pipeline would be required to comply with FHWA policy, (23 CFR 645, Subpart B) which states that Constitution would be required to show that no feasible alternative routes exist to obtain approval of the alternative M route from the NYSDOT and FHWA. As demonstrated in this analysis, multiple alternative routes do exist including the route proposed by Constitution."*  
  
This statement in the DEIS seems to be incongruous with most governmental agency guidelines that support collocation with existing easements. In fact, checking 23 CFR 645, Subpart B (as cited), there is no such statement as described. There is only one single mention of having to demonstrate that there is no feasible alternative location, and it has nothing to do with the issue described. Rather, it has to do with siting overhead utilities vs. burying them:

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CO43-13 See the response to comment CO42-41.

CO43-14 Section 3.0 of the EIS evaluated alternatives that would still meet the projects' objectives. One of the objectives is to deliver gas from Susquehanna County, Pennsylvania to the Wright Compressor Station. Therefore, all alternatives would be required to end at the Wright Compressor Station.

CO43-15 The NYSDOT regulations indicate that pipelines may cross a highway at a depth of 60 inches below the pavement. We conclude that due to traffic disruption and construction safety issues, it is not feasible to install the pipeline below the roadway along the length of or along extended segments of I-88. See also the response to comment CO37-15.

CO43-16 The citation for the statement in section 3.4.1.2 of the EIS has been corrected. As stated in the NYSDOT's Accommodation of Non-Communication Utilities on New York State Freeway or Control of Access Right-of-Way, "all exception requests must show that alternate locations are not feasible or cannot be implemented from a standpoint of providing efficient utility services in a manner conducive to safety, durability and economy of maintenance and operations." Therefore our assessment of alternative M is still applicable.



# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

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CO43-16 cont'd	<p><i>"No new above ground utility installations are to be allowed within the established clear zone of the highway unless a determination has been made by the transportation department that placement underground is not technically feasible or is unreasonably costly and there are no feasible alternate locations."</i></p> <p>In fact, rather than the burden of proof being upon the utility that there is no feasible alternative location for placement, quite to the contrary, Subpart B places the burden upon DOT to prove that a denial to use the transportation ROW would not result in adverse impacts elsewhere:</p> <p><i>"A State transportation department may deny a utility's request to occupy highway right-of-way based on State law, regulation, or ordinances or the State transportation department's policy. However, in any case where the provisions of this part are to be cited as the basis for disapproving a utility's request to use and occupy highway right-of-way, measures must be provided to evaluate the direct and indirect environmental and economic effects of any loss of productive agricultural land or any impairment of the productivity of any agricultural land that would result from the disapproval. The environmental and economic effects on productive agricultural land together with the possible interference with or impairment of the use of the highway and the effect on highway safety must be considered in the decision to disapprove any proposal by a utility to use such highway right-of-way."</i></p> <p>Comment D-8: (Page 3-31, 3.4.1.2 Alternative M) Following the erroneous interpretation of 23 CFR 645, Subpart B as quoted in the previous comment, the DEIS uses this misinterpretation to wrongly dismiss Alternative M: <i>"As demonstrated in this analysis, multiple alternative routes do exist including the route proposed by Constitution"</i>. As discussed above, 23 CFR 645, Subpart B does not provide any basis for this conclusion.</p>
CO43-17	<p>Comment D-9: (Page 3-31, 3.4.1.2 Alternative M) The discussion continues to further dismiss Alternative M with what appears to be convoluted reasoning: <i>"Further, because the easements are federally managed, Constitution would be required to successfully negotiate an easement for any portion of its project located within or crossing these access areas. If the NYSDOT refused the granting of an easement or if a mutually agreeable easement could not otherwise be negotiated in these areas, and the Commission were to grant an approving Certificate, it would essentially be approving a non-buildable project, as federally managed lands cannot be acquired through the power of eminent domain."</i></p> <p>This reasoning implies that an adverse relationship would exist between Constitution and the NYSDOT, rather than any utilization of the I-88 corridor for the pipeline being the product of mutual planning that would be overseen and approved by FERC. The implication is that it would be more desirable to choose a route where private landowners can be forced to sell via eminent domain, rather than publicly owned land where utilities can be placed, but may be subjected to greater regulation and oversight. Such reasoning should not play any role in determining the physical viability of an alternative.</p>
CO43-18	<p>Comment D-10: (Page 3-31, 3.4.1.2 Alternative M) Another reason cited in the DEIS for rejecting Alternative M and other potential collocation schemes with I-88 is the potential impact of construction on highway safety and use. However,</p> <p><i>Hudson Highlands Environmental Consulting 71 Colonial Avenue, Warwick, NY 10990 (845) 986-5350</i></p>

CO43-17 The commentator's statements regarding alternative M are noted.

CO43-18 The statements made in section 3.4.1.2 of the EIS regarding safety apply to both construction crews and the general public using the roadway during construction. This was provided as one of the reasons, not the sole reason, that alternative M was rejected.

# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

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CO43-18  
cont'd quoting again from 23 CFR 645, Subpart B, FHWA guidelines again appear to favor the benefits of accommodating utilities over safety:

*"Safety. Highway safety and traffic safety are of paramount, but not of sole, importance when accommodating utility facilities within highway right-of-way. Utilities provide an essential public service to the general public. Traditionally, as a matter of sound economic public policy and law, utilities have used public road right-of-way for transmitting and distributing their services. The lack of sufficient right-of-way width to accommodate utilities outside the desirable clear zone, in and of itself, is not a valid reason to preclude utilities from occupying the highway right-of-way..."*

CO43-19 Comment D-11: (Pages 3.38 - 3-40, TABLE 3.4.1-4 Comparison of Proposed Route Segment 5/6 to Alternative M Segment 5/6)  
This table, and all the other tables like it, provide a quantitative comparison of impacts between the proposed route and alternative routes. A true comparison of impacts, however, necessarily must also consider a qualitative comparison. For instance, there is a high probability that a wetland found along the I-88 corridor has been disturbed, either directly or by contaminated road runoff. It is likely to contain undesirable invasive non-native plant species, trash, sediment from road runoff, etc. By contrast, a wetland that will be impacted on the Henry S. Kernan Land Trust is part of a pristine, undisturbed wetland system that has a complete absence of invasive non-native species, but does have at least six different species of orchid and two different species of carnivorous plants. Putting a pipeline through an acre of disturbed wetland in the I-88 corridor is very different than putting a pipeline through an acre of pristine wetland that has been touted by the New York State Natural Heritage Program as one of the best examples of wetlands in the State of New York. This, however, is not reflected in what is just a comparison of numbers.

CO43-20 Comment D-12: (Pages 3.38 - 3-40, TABLE 3.4.1-4 Comparison of Proposed Route Segment 5/6 to Alternative M Segment 5/6)  
It was noted elsewhere in the DEIS that many of the numbers found in the alternatives comparison tables and discussions are not based on actual field data, but rather "desktop" analyses because field data is not available for the alternative routes. While it is understandable that the authors would seek to compare data that was equivalent in its accuracy, bad data can yield nothing but bad analyses. For instance, in this table, actual field data for the Proposed Route Segment 5/6 indicates that the proposed route will cross approximately 20,347 linear feet (3.85 miles) of wetlands. The desktop analysis, however only finds there to be 2,275 linear feet (0.43 mile) of wetland crossing. The desktop analysis therefore failed to detect 89% of the wetlands confirmed to be present along the route by field inspection. This is far too large an error for the comparative analysis to be considered to be at all reliable.

Comment D-13: (Pages 3.38 - 3-40, TABLE 3.4.1-4 Comparison of Proposed Route Segment 5/6 to Alternative M Segment 5/6)  
At the very barest minimum, in the absence of field data, a desktop analysis should also include NRCS soil data. While also still not completely reliable, the inclusion of mapped soils considered "hydric" added to the wetlands mapping that was utilized would probably provide a much more accurate depiction of wetlands within the alternative pipeline corridors. In investigating alternative routes around the Charlotte Forest, I found this to be a much more

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CO43-19 See the response to comment CO5-6.

CO43-20 The FERC does not necessarily require an applicant to field survey alternative routes. Therefore, desktop data are typically used so as to compare similar data. It is expected that any inherent discrepancies in the desktop data as compared to field data would apply to both the proposed route and the alternative route equally. In addition, as noted in appendix L (wetlands crossed by the proposed projects), tables L-1 and L-2 are a mixture of field delineated wetlands (which may have not yet been verified by the COE) and desktop data (for areas for which Constitution did not have survey permission). If the project is certificated, then Constitution must survey all previously unsurveyed parcels (access might have to be obtained in some cases), and those new field data would be used during permitting to supplant and refine the data originally obtained from desktop sources.

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# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

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CO43-20  
cont'd encompassing indicator of the presence of wetlands than just NWS and NYSDEC mapping by themselves.

Comment D-14: (Pages 3.38 - 3-40, TABLE 3.4.1-4 Comparison of Proposed Route Segment 5/6 to Alternative M Segment 5/6)  
Even worse, in actuality, the difference is even greater. About 24% of the properties along the route have not yet been surveyed in the field. On just the Kernan Land Trust property alone, we have documented additional wetlands that would add about another 700 linear feet of wetland crossing that, despite having provided this information in a FERC upload, has not been accounted for anywhere in the DEIS. It is therefore highly likely that even more wetlands lie within the other properties that have not been surveyed.

CO43-21  
Comment D-15: (Page 3-40, Proposed Route Segment 5/6 Compared to Alternative M Segment 5/6)  
In the end, the DEIS takes this comparative quantitative data and draws conclusions that are largely unsubstantiated and unsupportable: *Alternative M segment 5/6 also crosses fewer forest interiors, Audubon-designated forest blocks of importance, property owners, and shallow bedrock areas. However, the proposed route segment 5/6 crosses fewer waterbodies, forested wetlands, and much fewer nearby residences and steep side slopes. Therefore, we do not consider adoption of alternative M segment 5/6 to be preferable to the proposed pipeline.*

Without any qualitative analysis, and without any explanation of the method of analysis or basis for conclusions, the DEIS authors make a judgment that the proposed route is preferable to the alternative route. Looking at the items listed, the conclusion seems to give more weight to the impact of the alternative route on an additional 2.7 acres of forested wetlands than it does to the proposed route's impact on an additional 140.6 acres of interior forest. Likewise, the DEIS authors apparently conclude that the fact that Alternative M would come within 50 to 250 feet of 51 more residences is far more egregious than the fact that the proposed route would confiscate private property from an additional 113 property owners. Why? What is the basis for these very questionable conclusions? This same statement also dismisses the fact that the alternative would completely eliminate (not just reduce) any impact upon any Audubon-designated forest blocks of importance, and ignores entirely that the alternative would also reduce impacts on agricultural land by an estimated 58.6 acres.

Looking more carefully at these items, even without a qualitative analysis, it is clear that the contrary conclusion is more supportable. Alternative M segment 5/6 is obviously preferable to the proposed pipeline route.

CO43-22  
Comment D-16: (Page 3-60 & 3-61, 3.4.3.2 Minor Route Variations Reported By Stakeholders)  
I am relieved to see that FERC is asking the applicant to reassess alternative routes to avoid the unfragmented forest and wetland resources on and near the Kernan Land Trust property (MP 90.8). However, this information was requested to be provided prior to the close of the comment period, and with less than a week left, it has still not been made available. This is obviously the most critical information to my clients regarding this project. If the comment period does close as planned, they and I will be deprived of our rights under NEPA to review and comment on the new material, and have those comments officially considered under the remaining NEPA review.

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CO43-21

See the response to comment CO5-6 regarding qualitative versus quantitative data. As stated in section 3.0 of the EIS, the alternatives data comparison was obtained from desktop sources. Where environmental data was presented within the alternatives analysis, it was data collected from desktop (e.g., maps, literature, aerial photography, and agency databases) sources. Each alternative was considered to the point where it was clear that the alternative was either not reasonable, would result in substantially greater environmental impacts that could not be readily mitigated, offered no significant potential environmental advantages over the proposed projects, or could not meet the projects' objectives. Alternatives that appeared to result in less than or similar levels of environmental impact were reviewed in greater detail. Section 3.0 of the EIS discussed and analyzed each of the alternatives evaluated in sufficient detail to explain why they were eliminated from further consideration or are recommended for adoption into the respective project. Section 3.0 of the EIS presented a table of factors for each alternative route.

Subjective assessments are used in evaluating numerous, disparate parameters that are difficult or impossible to unify into a simple decision-making formula for an alternatives analysis. These parameters do not always have equal weight in the assessment with factors such as overall disturbance (segment length, amount of acreage to be disturbed), longer-term impacts (forest impacts), impacts on state or federally regulated resources (streams, wetlands-particularly PFO wetlands), or affecting safety or constructability (side slope construction) may have more weight than factors with short-term impacts (agricultural row crops or hayfields), non-regulated resources (trails crossed), or other factors (number of roads and railroads crossed). Side slopes are typically more problematic for construction feasibility than steep slopes. We have updated section 3.4 to better explain the general process of our assessment and parameter weighting considerations.

## COMPANIES AND ORGANIZATIONS

### CO43 – Hudson Highlands Environmental Consulting (cont'd)

CO43-21  
(cont'd)

As acknowledged in the draft EIS on page 3-40 for the analysis of alternative M segment 5/6, there are benefits and liabilities associated with both options. The proposed route would be considerably shorter, thereby disturbing less land overall, and would affect less PFO wetlands, waterbodies (including those with drinking water designations), nearby residences, and side slopes. Alternative M segment 5/6 would be much more collocated with adjacent rights-of-way and would affect less forest interior, Audubon forest blocks of importance, property owners, and shallow bedrock. Overall forest impacts would be relatively similar. Given the relative benefits and liabilities associated with the two options on a comparative basis, we concluded that alternative M segment 5/6 was not preferable to the proposed route segment.

CO43-22

See the response to comment FA1-1. Any information required prior to the end of the draft EIS comment period was incorporated into this EIS. Any information provided prior to construction will be filed on our e-Library system and will be available to the public. Therefore, all information will be made available for public review. Constitution's response to our request was filed on our e-Library system on April 7, 2014 ([http://elibrary.ferc.gov/0/idmws/file\\_list.asp?document\\_id=14202518](http://elibrary.ferc.gov/0/idmws/file_list.asp?document_id=14202518)).

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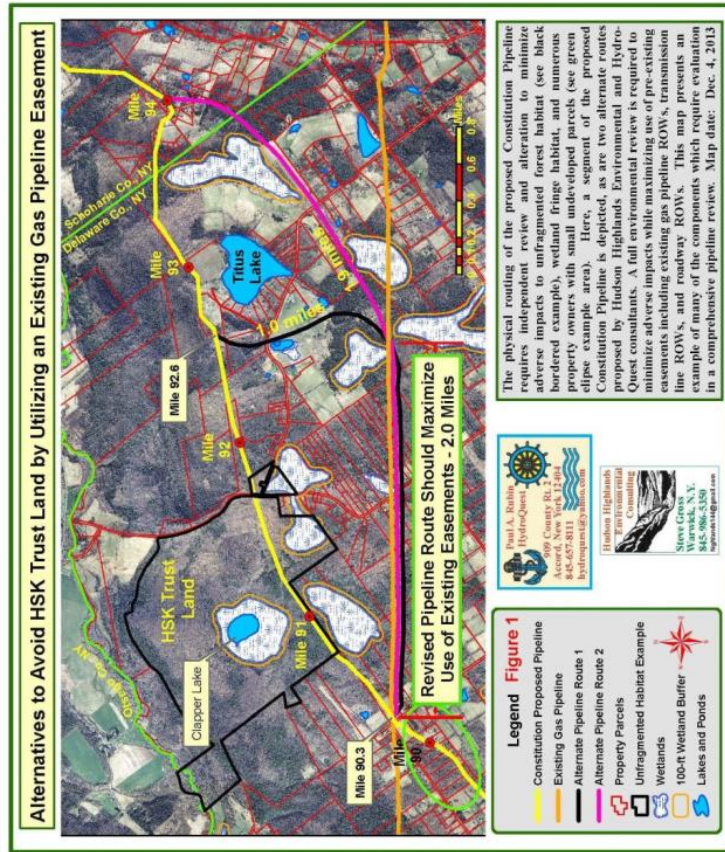
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CO43 – Hudson Highlands Environmental Consulting (cont'd)

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CO43-22  
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# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

S-710

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CO43-23	<p>Comment D-17: (Appendix H-1, Status of Minor Route Variations Reported to Constitution, Page H1-7)</p> <p>In total, the Kernan Land Trust submitted eight potential minor alternative routes to circumvent the unfragmented forest and wetland resources on and near the property managed by the Trust, otherwise known as the Charlotte Forest. Six of these routes were submitted by Bagdon Environmental in August 1, 2103 (see figure on page 11). An additional two routes were submitted by Hudson Highlands Environmental Consulting on December 5, 2013 (see figure on page 12). In tabular form, Appendix H-1 appears to acknowledge the evaluation of two of these routes. However, while the routes are designated by being located around MP 90.0 and MP 90.8, there is no way to identify which two of the eight routes were evaluated. Brief reasoning is provided for rejecting both, but without knowing which of the routes was being evaluated, this information is impossible to review and precludes any meaningful analysis and comment.</p>
CO43-24	<p>Comment D-18: (Appendix H-2, Status of Minor Route Variations Reported by Stakeholders, Page H2-5)</p> <p>No explanation is provided as to the difference between Appendix H-1 and Appendix H-2. Both deal with minor route variations, the first "reported to Constitution," and the second "reported by stakeholders." This only adds to the existing confusion, as the alternative routes provided by the Kernan Land Trust were "reported to Constitution" by a "stakeholder," and would seem to fit into both categories. The second table actually states that for it, five proposed routes were reviewed, but again does not identify which five of the eight were being evaluated, nor if any were the same as reviewed in Appendix H-1. Again, all five were rejected, with five brief reasons provided, which may or may not correspond specifically each to a specific alternative route. Any attempt to match any particular review to a specific route failed. For instance, looking at the first of the five reviews, <i>"the re-route followed a propane line with documented safety issues, added too many points of inflection to the line, and was located too close to a cemetery,"</i> no single alternative of the eight submitted followed the existing propane gas line, plus had multiple points of inflection, and also passed close to a cemetery. Accordingly, as with Appendix H-1, this effectively precludes any meaningful analysis and comment.</p>
CO43-25	<p>Comment D-19: (Appendix H-2, Status of Minor Route Variations Reported by Stakeholders, Page H2-5)</p> <p>In an attempt to craft some level of meaningful response, I attempted to try to at least understand the meaning behind the phrase <i>"the re-route followed a propane line with documented safety issues."</i> Of the eight alternative routes around the Charlotte Forest that were supplied by the Trust, three involved some utilization of collocation with the existing propane gas pipeline. I was most interested in finding any review of the two alternatives I had proposed in December, both of which partially collocated with the propane line. Having no knowledge of any "documented" safety issues with the propane line, I contacted FERC staff to be directed to where I might find this documentation. I was told that it would be somewhere in the docket, and when I asked more specifically where it might be located, I was told that it could be anywhere, but possibly within comments that were received from outside parties. Given the enormity of the docket, I pleaded for some more direction or assistance in locating this information so that I might be able to understand the point being made in the DEIS, and therefore be able to respond to it intelligently. I was told that it would take "a couple of days", but that I'd receive a phone call in response. After the passage of more than a month, and repeated messages left on voicemail, I finally received a phone call on Friday, March 28, that</p> <p><i>Hudson Highlands Environmental Consulting 71 Colonial Avenue, Warwick, NY 10990 (845) 986-5350</i></p>
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CO43-23 See the response to comment CO4-2.

CO43-24 As stated in section 3.4.3.1, appendix H-1 details the parcel number, location, assessment, status of the alternative relative to the proposed route, and landowner resolution status for each minor route variation identified to Constitution. As stated in section 3.4.3.2, appendix H-2 details the parcel number, location, assessment, status of the alternative relative to the proposed route, and landowner resolution status for each minor route variation as a result of comments we received from potentially affected landowners. See the response to comment CO4-2.

CO43-25 See the response to comment CO12-3.



# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

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CO43-25  
cont'd documents could be supplied to me by email. I subsequently received that email on the evening of Sunday, March 30, with one document attached; the November 2013 Resource Report for "Alternatives".

Already being very familiar with this document, I again reviewed pages 18-71 as suggested by the staff member to see if I had missed anything before. There are only two short references that might have the slightest bearing to this statement. One is within the table on page 10-17: "Alternative Route C was not incorporated into the Primary Route due to... 3) environmental and safety concerns associated with installing the pipeline parallel to the Schoharie Creek floodplain" and the second is on page 10-65: "The frequent flooding of the Schoharie Creek corridor creates a significant safety concern for both pipeline construction and long term operation of the pipeline." However, any flooding issues associated with the Schoharie Creek would not apply, as I only proposed using a section of the pipeline easement within Delaware County far from the Schoharie Creek. I immediately responded to the email, hoping there might be something more, but never received a response. Therefore, once again, this lack of information precludes any meaningful analysis and comment on an issue that is critical to my clients.

The DEIS needs to present information in a manner that is clear, understandable, and accessible. This has not happened in this case.

CO43-26 E. Environmental Analysis

Comment E-1: (Page 4-58, 4.3.4 Conclusion -- Surface Water Resources)  
On Page 4-52, the DEIS requires Constitution to submit the following additional information to FERC:

*"Prior to the end of the draft EIS comment period, Constitution should file with the Secretary a description of impacts and any proposed impact avoidance, minimization, and mitigation measures for each waterbody that would not be directly crossed by the trenchline, but would be impacted by the construction right-of-way."*

This request confirms that FERC has not yet received sufficient information to make their assessment of the proposed project's impact on surface water resources. Likewise, on the same page, the DEIS notes:

*"Constitution intends to submit water withdrawal permit applications to the Susquehanna River Basin Commission, Delaware River Basin Commission, and NYSDEC in the first quarter of 2014. As such, regulatory agencies have not provided feedback on Constitution's proposed water withdrawal plans, including the use of waterbodies containing fisheries of special concern."*

At the time of the release of the DEIS, therefore, Constitution had yet to even submit permit applications to the agencies that are charged with evaluating the proposed plans in regard to water withdrawals, and these agencies therefore had obviously not even begun their review to determine whether the use of these waterbodies would pose an adverse impact, including on fisheries of special concern, and whether a permit would be granted. Accordingly, FERC had not received feedback or comment from these agencies. Yet incredibly, FERC, an agency that does not have the special expertise embodied in the agencies with specialized missions to protect surface water resources, concludes in the DEIS, with admittedly missing critical

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See the response to comment FA1-1. We have included a recommendation in section 5.2 of the EIS that prior to receiving written authorization from the Director of OEP to commence construction of their respective project facilities, the Applicants should file documentation that they have received all applicable authorizations required under federal law (or evidence of waiver thereof). Section 4.3.3.5 of the EIS has been updated regarding protective measures for waterbodies that would not be directly crossed by the pipeline but would be within the construction right-of-way. Additionally, we concluded that implementation of Constitution's Procedures would minimize impacts on waterbodies.

S-711

# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

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cont'd information and without expert input from the noted agencies, that *"no long-term impacts on surface waters are anticipated."*

Then what is the possible basis for this conclusion? In part, FERC seems to be basing this conclusion on faith that Constitution would *"implement erosion controls," "restore the streambanks and streambed contours as close as practical to pre-construction conditions,"* and during ongoing maintenance, *"would employ protective measures similar to those proposed for use during construction."* Without complete information submitted to FERC, and no submission at all made to the permitting agencies, FERC simply lacks any foundation for this premature conclusion. These are all assumptions that could have been made as soon as the project was announced. In fact, the same assumptions can be made for any project currently proposed or yet to be ever proposed. Theoretically, it can be reasonably assumed that *any* project will implement erosion controls, perform any required restoration, and employ other protective measures as needed. If that is the case, there is no need for NEPA; no need to do a reasoned assessment of environmental impact. It can be simply assumed that any proposed action follow best management practices and adhere to permit requirements, so they can *all* be presumed to be approved.

If this is not the case, however, then this and any similar conclusion throughout the DEIS is without any merit whatsoever, and the entire DEIS is invalid, as would be any decision that would be based on it.

CO43-27 Comment E-2: (Page 4-59, 4.4.1 Existing Wetland Resources)  
Approximately 24% of the properties along the proposed pipeline route still have not been surveyed for wetlands. In order to try to have enough data for a meaningful conclusion, Constitution utilized remote sensing methods, as stated in the DEIS: *"For areas where Constitution was denied survey access, publicly available National Wetlands Inventory (NWI) and state wetlands maps (as applicable) were used to approximate the locations and boundaries of wetlands within the project area."* These maps, however, were never intended to be utilized in such a specific way. Rather, they provide guidelines and indications as to where wetlands may be located which must be checked by field work early on in the process. As noted in an earlier comment, this methodology successfully identified only about 11% of the amount of wetlands that were field located. It can then be reasonably assumed that it is likely that these same methods have probably failed to identify about 89% of the wetland resources that exist and may be disturbed by the pipeline in the remaining unsurveyed properties. This is an unacceptable level of data that precludes any meaningful analysis.

CO43-27

See the response to comments FA1-1 and FA4-3.

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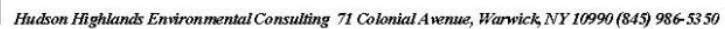
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# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

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CO43-28 | Comment E-3: (Page 4-59, 4.4.1 Existing Wetland Resources)  
In the case of the wetland conditions that exist on the Kernan property, this methodology seems to have failed completely, not detecting any part of an unmapped wetland complex that lays between and connects to the NYSDEC-regulated Mud Pond (D-8) and Clapper Lake (S-4) wetlands. As a result, these wetlands have not been included in the impact analysis.

CO43-29 | Comment E-4: (Page 4-59, 4.4.1 Existing Wetland Resources)  
There is actually no excuse for the described wetlands to have been excluded from the analysis. The Kernan Trust have long advised both Constitution and FERC of their existence, and then on December 5, 2013, provided a map (see below) depicting the preliminary boundaries of these wetlands, subject to further investigation in the Spring. Further, Constitution's own wetland delineations on the pipeline properties depicts the wetland boundaries on neighboring properties extending to the Kernan property line. It would have been clear to any observer that the same wetland boundary continues into the Kernan property.

Comment E-5: (Page 4-59, 4.4.1.1 Pipeline Facilities)  
Per my previous comments, these projected wetlands impacts are underestimated. For one, this estimate fails to include a significant amount of wetlands impact on the Kernan Land Trust property.

CO43-30 | Comment E-6: (Page 4-61, 4.4.1.9 State Wetland Classifications – New York)  
*"The proposed pipeline would cross 4.4 acres of NYSDEC-regulated wetlands, all of which are Class II wetlands, as defined in 6 NYCRR Part 664 (appendix L)"*  
Some of the newly delineated wetlands are part of larger wetlands that are regulated by the NYSDEC. As such, even though these areas do not appear on current NYSDEC wetland maps, they will nonetheless come under all the same regulations as NYSDEC wetlands, including having a regulated 100-foot adjacent area, commonly known as a buffer. Appendix L-2 fails to note that many of these areas fall under NYSDEC jurisdiction, such as the series of wetland areas with the designation "DE-1P-W128" that are all connected to NYSDEC wetland D-8, otherwise known as Mud Pond. The same is true of the additional wetlands that were located, but not acknowledged in the DEIS, on the Kernan Land Trust property.

Comment E-7: (Page 4-61, 4.4.1.9 State Wetland Classifications – New York)  
Adding just the additional acreage listed in Appendix L-2 for the entirety of Wetland DE-1P-W128 increases the impact on NYSDEC regulated wetlands by 2.79 acres from 4.4 acres to a new calculated total of 7.19 acres. As noted, the impact on other parts of this same wetland within the Kernan Land Trust property will increase this total even more. There may also be additional impacts along the pipeline route on other NYSDEC regulated wetlands that have not been identified as such.

Comment E-8: (Page 4-61, 4.4.1.9 State Wetland Classifications – New York)  
While the DEIS acknowledges that NYSDEC regulated wetlands are surrounded by a protective 100-foot regulated adjacent area, there is no assessment of the impact of the pipeline on the adjacent area of any of the NYSDEC regulated wetlands. This assessment should at a minimum provide a calculation of the amount of area impacted, but in addition, there should be an assessment of the impact of the loss of the function that the adjacent area provides.

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CO43-28 | Field data have not yet been obtained in areas where field survey access was denied by landowners. Data were obtained from "desktop" sources such as agency databases, aerial photography, maps, literature, and other available sources in these cases.

CO43-29 | See the response to comments CO5-10 and CO43-23.

CO43-30 | If the project is certificated, then Constitution must survey all previously un-surveyed parcels where access had been denied, and this new field data would be used during permitting to supplant and refine the data originally obtained from desktop sources. Wetland impacts would be verified by the COE and the NYSDEC; these agencies would identify any appropriate mitigation.

# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

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CO43-31 Comment E-9: (Page 4-61, 4.4.2 Wetland Construction Procedures)  
*"Because surveys could not be obtained for all parcels crossed by the pipeline, the acreages were determined through a combination of field survey data and a review of the NWI maps."*  
As noted above, many wetlands, such as those known to exist on the Kernan Land Trust property, were missed by the NWI maps, which are not reliable. A preliminary survey of unmapped wetlands (see page 16) on the Kernan property was provided in an upload to the FERC docket, and available to Constitution and FERC months before the release of the DEIS. Yet, this information was ignored, as neither these wetlands, nor the impact to them, have been acknowledged anywhere in the DEIS.

CO43-32 Comment E-10: (Page 4-63, 4.4.3 General Impacts and Mitigation)  
*"Herbaceous wetland vegetation would regenerate quickly, typically within 1 to 3 years, and emergent wetlands would not be subject to vegetation maintenance. Temporary impacts on forested and shrub-scrub wetlands would be long-term, because woody vegetation would take several years to regenerate."*  
The DEIS notes that Constitution would restore the wetland contours and hydrology, but the quoted sentences indicate they would then step back and allow the vegetation to regenerate on its own. This could be disastrous.

No matter how careful and diligent the work crew may be, it will be impossible to completely restore the original structure of the wetlands once they are disturbed. The soil horizon that developed over the course of thousands of years will suffer some degree of mixing and compaction. The intricate layering of the topsoil, including its organic components, as well as the microstructure which is the result of root action and the action of microorganisms, insects, insect larvae, and other macroinvertebrates, simply can not be replicated.

Wetland areas that are disturbed like this are vulnerable to being revegetated by more tolerant, aggressive, non-native species such as Phragmites and purple loosestrife, among others. This is especially true in a linear construction zone within which these species can be easily transported from one area to another by equipment, workers, or even wind. Without having a well-crafted mitigation plan that includes careful species selection, planting, and monitoring, there is a very high probability that these disturbed areas will become infested with non-native invasive species, and that once established, these species will spread to other undisturbed parts of the wetlands as well. This is not acceptable mitigation, and within the Kernan Trust's Charlotte Forest, this would represent a serious threat to the entirety of the forest and wetlands there, which are remarkably still absent any invasive species.

Comment E-11: (Page 4-64, 4.4.3 General Impacts and Mitigation)  
In concert with the previous comment, it is troublesome to see *"seeding restored wetlands with annual ryegrass"* among the list of measures to be taken. Annual ryegrass is used to temporarily stabilize exposed soils following construction activities, and, if meant to again support vegetation, is typically replaced with lawn or landscape material at a later date. A "restored wetland" is one in which all three criteria that define a wetland have been re-established; hydric soils, wetland hydrology, and hydrophytic vegetation. If an area has been left bare to the point that annual ryegrass may be used to stabilize it, it can hardly be characterized as "restored." Neither would seeding it with annual ryegrass possibly make it a restored wetland, as annual ryegrass is not considered to be hydrophytic vegetation.

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CO43-31 See the response to comments CO5-10 and CO43-23.

CO43-32 As stated in section 4.4.3 of the EIS, Constitution would segregate topsoil, restore contours, and use low ground weight equipment or timber mats. Section 4.4.3 of the EIS has been revised to state that wetlands would be temporarily seeded with annual ryegrass during spring, summer, or early fall while Aroostook (if available) winter rye would be used in winter. Permanent seed mixes can be found in Constitution's ECPs. Wetland restoration would not be considered successful until: the affected wetland satisfies the current federal definition for a wetland; vegetation is at least 80 percent of either the cover documented for the wetland prior to construction or in adjacent wetland areas that were not disturbed by construction; if natural revegetation is used, the plant species composition is consistent with early successional wetland plant communities in the affected ecoregion; and invasive species and noxious weeds are absent, unless they are abundant in adjacent areas undisturbed by construction. Within 3 years after construction, Constitution would file a report identifying the status of each wetland. For any wetlands where revegetation is not successful at the end of 3 years, it would develop and implement (in consultation with a professional wetland ecologist) a remedial revegetation plan to actively revegetate the wetlands and continue these efforts until revegetation is successful. In our experience wetlands can be restored using methods outlined in our Procedures.

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# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

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CO43-33 | Comment E-12: (Page 4-64, 4.4.3 General Impacts and Mitigation)  
The 3-year monitoring program mentioned a few sentences down in the DEIS would essentially be useless if no wetland vegetation is installed. Given the intention to maintain the cleared easements, the 3-year time period for monitoring would also be inadequate, even if wetland plants did take hold. As long as what had been wetland forest is artificially maintained as an open, wide, access easement, the threat of invasive species becoming established is very real, especially considering that maintenance equipment will not get the same scrutiny as construction equipment and will be more likely to import the seedstock, etc., of invasive species into previously uninfected areas. To have a chance of being truly effective, the period of monitoring would have to at least be equivalent to the period of maintenance.

CO43-34 | Comment E-13: (Page 4-65, 4.4.4 Alternative Measures)  
*"Finally, Constitution's ECPs state that Constitution would consult with appropriate federal or state agencies to develop a project-specific wetland restoration plan. Revegetation and noxious weed control plans are included in Constitution's state-specific ECPs."*  
This wording seems to indicate that there are measures other than those described in the body of the DEIS that may be employed, but are found in another document. I tried to locate a document that dealt with "Revegetation" in the docket, but failed. I did, however locate the measures that deal with invasive species.

Reading through these measures, and seeing liberal usage of such words as "restore", might make it seem that simple adherence to a "plan" like these will take care of everything. It's like the television commercials for companies that promise that they can restore things following a flood or fire "like it never really happened." The truth is they can't. The same is true with the impacts that will occur as a result of the pipeline construction. The disturbance of a pristine wetland can not be mitigated so that it will be a pristine wetland again. The scars of disturbance in wetlands from a century ago are still evident today, and with the type of massive construction project being proposed here, the disturbance will remain even more evident. The same is true for any measures designed to control invasive species. Having a monitoring program that only lasts a few years, and then trying to respond to the detection of an unwanted species by trying to kill it with herbicides or mechanical removal is doomed to failure. The only successful method of controlling invasive species is to prevent them from becoming established in the first place.

CO43-35 | Comment E-14: (Page 4-65, 4.4.4 Alternative Measures)  
The ECP for Invasive Species was reviewed by Dr. Bernd Blossey, Associate Professor and Director, Ecology and Management of Invasive Plants Program at Cornell University. Dr. Blossey is the top expert on invasive species in New York State. He has prepared a comment letter on the DEIS regarding this issue, but I'd like to include an excerpt from his letter here to support my point:

*"Your proposed mitigation measures, while laudable and extensive, ignore the fact that, once established, no physical or chemical methods exist to eradicate or contain some of the problematic invasive species that were identified in the vicinity of the pipeline. I am particularly concerned with Japanese knotweeds (Fallopia spp.) and common reed (Phragmites), both species widely distributed in the region, and along highway ROW's that your vehicles will use. Both species respond to disturbances and have shown the ability to disperse aggressively. Even containing these species (no early detection will allow you to discover the first colonizing individuals) will require near annual and repeated use of*

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CO43-33 | See the response to comment FA6-10. Invasive species are discussed in section 4.5.4 of the EIS and we have updated this section with new information and recommendations regarding monitoring and preventing the spread of invasive species.

CO43-34 | See the response to comment CO43-36. As stated in section 2.3 of the EIS, the Pennsylvania ECP (Volume II Appendix I) and the New York ECP (Volume II Appendix J) can also be found at [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14160901](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14160901).

CO43-35 | See the responses to Dr. Blossey's letter in comments CO24-1 through CO24-4. The commentor's statement regarding Roundup Rodeo is noted. As stated Constitution's ECPs, herbicide use would be conducted in accordance with agency regulations and manufacturer's recommendations.

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# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

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CO43-35  
cont'd *herbicides in areas currently considered pristine environments. The frequent use of herbicides to combat plant invaders will further degrade and have unintended consequences for native biota in the affected wetlands. In fact, herbicide use or other treatments designed to negatively affect plant invaders often further stress native species and further their declines."*

In particular, I note that the recommended measures include the use of Roundup Rodeo, one of the most notorious herbicides that has been cited as causing significant damage to native plants and ecological systems. Its use in the vicinity of the Clapper Lake and Mud Pond wetlands could very much do far more harm than good, especially given that the pipeline would disturb drainageways that feed into these wetlands, and could carry destructive herbicides into undisturbed areas that currently support some remarkable ecological associations.

CO43-36 *Comment E-15: (Page 4-67, 4.4.5 Compensatory Mitigation) "In watersheds where an in-lieu fee program is not available, Constitution would conduct permittee responsible mitigation."*

If it is possible for the permittee to conduct mitigation within any watershed, it should be done the same way in all watersheds. As it is proposed, the crux of the wetland mitigation program is simply to write a check. It's a painless, easy way for the applicant to satisfy their obligation. However, the impact that will be wrought upon individual property owners and the environment as a whole will not be as painless and easy. The proposed method of mitigation is, in fact, too easy. It provides no incentive for the applicant to attempt to minimize the extent of impact, and to employ other methodologies that may be more expensive, but less destructive. For instance, trenchless technologies are being utilized in only certain select instances. Impacts from installation of the pipeline could likely be reduced in still more areas if this technology were used elsewhere as well. But if the cost of employing such technologies is weighed against the cost that may be contained in an easily written check, it is likely that the check will win out to the detriment of landowners and the environment.

Requiring in-watershed wetland mitigation by the applicant in all cases could result in less wetland disturbance. It may prove difficult to locate sufficient areas for mitigation, or to produce mitigation designs that would be to the public benefit. By necessity, the applicant may be forced to look at ways to reduce, not just mitigate, the actual amount of wetland impact. That incentive is eliminated when it becomes far too easy to just write a check.

CO43-37 *Comment E-16: (Page 4-67, 4.4.5 Compensatory Mitigation) "Constitution identified a ratio of mitigation acres to impact acres for each type of impact and mitigation. Constitution assumed degraded wetlands (such as those impacted by agriculture) required less mitigation and therefore had lower mitigation ratios."*

This statement suggests that Constitution has indeed made some level of qualitative assessments in regard to the health of individual wetlands that would be impacted, but it doesn't appear to have disclosed this information for public review. This is information that would be extremely helpful to me, and others, in conducting this review. Is it available anywhere? This chapter of the DEIS should also fully disclose what ratios are being used in determining the proper level of mitigation.

CO43-38 *Comment E-17: (Page 4-67, 4.4.6 Conclusion) "With adherence to the ECPs, Procedures, the NYSDEC and the COE permit requirements, and our recommendations, impacts on wetlands would be minor. While adverse and long-term*

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CO43-36 The commentator's statements regarding wetland mitigation are noted. As stated in section 4.4.5 of the EIS, appropriate wetland mitigation for the pipeline would be determined by the COE, the NYSDEC, and the PADEP.

CO43-37 Section 4.4.5 of the EIS contains the most recent information available regarding wetland mitigation.

CO43-38 As stated in section 4.4.6 of the EIS, Constitution would adhere to its ECPs and Procedures. As stated in section 2.3 of the EIS, Constitution's Pennsylvania ECP (Volume II Appendix I) and the New York ECP (Volume II Appendix J) can be found at [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14160901](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14160901). A copy of our Procedures containing Constitution's proposed modifications can be found in Appendix K at [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14160901](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14160901). If the project is certificated, then Constitution would be required to survey all previously un-surveyed parcels (access might have to be obtained in some cases), and these new field data would be used during permitting to supplant and refine the data originally obtained from desktop sources. Wetland impacts would be verified by the COE, the PADEP, and the NYSDEC, and these agencies would identify any appropriate mitigation. The level of mitigation required by the COE, the NYSDEC, and the PADEP for unavoidable impacts would be based on actual wetland delineations including field assessment for any parcels not currently surveyed. Our Procedures require that wetlands be demonstrated to be functional and re-vegetated in order for restoration to be considered complete.

# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

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CO43-38  
cont'd *impacts on wetlands would occur, with Constitution's implementation of its mitigation we conclude the impacts would be reduced to less than significant levels."*

This is a huge project, extending over 124 miles. With 76% of the project area surveyed, it has been calculated that 91.8 acres of wetlands will be impacted. This number *will* rise once the entire project area is surveyed. This is a very large and significant number. While a large amount of the wetlands can be restored, I personally and professionally find it doubtful that the measures described are sufficient to achieve the desired goal. The impact on acres of wetlands in other areas will be permanent. In the case of the Charlotte Forest, the pipeline will irreversibly fragment a managed interior forest, unavoidably introduce invasive species (despite claims in the DEIS to the otherwise) into an area currently and remarkably absent of them, permanently destroy forested wetlands, and threaten the health of other nearby portions of the wetlands that support multiple species of native orchids and carnivorous plants. There is no way that this impact can be characterized as "minor" or "reduced to less than significant levels."

As with the previous conclusion regarding surface water resources (Comment E-1), this conclusion lacks a foundation. As the DEIS states, the conclusion of no impact is based on adherence to permit requirements that have not even been drafted, and mitigation measures that have yet to be designed – on wetlands that in part have yet to be located, surveyed and evaluated. Again, as before, this conclusion is without any merit whatsoever, which further contributes to the entire DEIS being invalid, as would be any decision that would be based on it.

CO43-39 Comment E-18: (Page 4-70, 4.5.3 Interior Forest Habitat)  
*"In order to reduce impacts on sensitive habitat, Constitution reduced its proposed construction right-of-way width from 110 feet, as originally proposed, to 100 feet within interior forested areas where practicable."*  
While reducing the number of trees that would be removed is certainly a desirable goal, the idea that reducing the width of the cut by 10 feet would result in any meaningful effect of reducing forest fragmentation is, to put it simply, absurd. It is comparable to thinking that stabbing someone with a 10-inch blade rather than an 11-inch blade might mitigate the impact of the wound.

Cutting a swath through an interior forest is what is going to fragment it. Reducing the width of that swath by 10 feet will have a de minimis effect on reducing the adverse impacts of the cut.

CO43-40 Comment E-19: (Page 4-70, 4.5.3 Interior Forest Habitat)  
Constitution has shown that it is possible to work within a 75-foot right-of-way where it crosses wetlands. Why could this same width or even less not be applied to interior forests as well?

CO43-41 Comment E-20: (Page 4-71, 4.5.3 Interior Forest Habitat)  
*"Although Constitution has attempted to route its project adjacent to existing disturbance and outside of forested areas..."*  
The Kernan Land Trust has not witnessed any such attempts. The Trust has made many attempts to try to negotiate a route that would circumvent the Charlotte Forest, which is an interior forest. This has included providing Constitution with no less than eight potential route deviations. All have been rejected without suitable explanation. Overall, the proposed route shows no evidence of a commitment to route the project adjacent to existing disturbances.

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CO43-39 The commentor's statement regarding forest interior is noted. We agree that the reduction in right-of-way width would not eliminate the fact that the pipeline would still fragment the forested segments. See the response to comment CO9-1.

CO43-40 Crews would utilize different construction methods to cross a wetland than in upland forests. Reductions in right-of-way widths are generally only feasible for short distances, and nearly always require extra workspace to store the spoils excavated from the trench. Most upland forest crossings are considerably longer than wetland crossings, requiring an even larger number of extra workspaces, which still may have to be sited in upland forest, negating any perceived benefit. Within wetland areas the width of the right-of-way can be reduced by the use of the push-pull method to float the pipeline into place. This method cannot be used in upland areas. Specialized crews are often used in wetland areas to minimize the amount of time needed to construct. While similar reductions could be done in forested tracts, these reductions in right-of-way width are often very time consuming and increase the likelihood of erosional impacts. Side and vertical slopes can also create the need for additional right-of-way width to safely construct the pipeline. The reduction in width would be in the temporary right-of-way; thereby reducing long-term impacts on trees, but the forest would still be fragmented by the permanent right-of-way.

CO43-41 The commentor's statement regarding collocation is noted. We support the collocation of pipelines with existing utilities where practical and recognize the value of collocation in regard to environmental resources. However, it is not always practical or feasible to collocate with an existing utility. See the response to comment CO43-8.

# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

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CO43-41  
cont'd Only 9% has been routed adjacent to existing easements, and only 0.4% will have any part of the operational portion of the route coincide with existing easements. The assumption expressed here does not appear to be supported by evidence.

CO43-42 Comment E-21: (Page 4-72, 4.5.4 Noxious Weeds and Other Invasive Plant Species)  
*"Based on Constitution's implementation of its Invasive Species Management Plans and our recommendation to finalize surveys and the locations of weed wash stations before construction, we conclude that the potential spread of noxious or invasive weeds would be effectively minimized or mitigated."*  
As noted earlier, these measures were reviewed by Dr. Bernd Blossey, Associate Professor and Director, Ecology and Management of Invasive Plants Program at Cornell University, and found to be insufficient to achieve the stated goals. The introduction of invasive species into areas where none currently exist will be an unavoidable impact of the proposed action.

CO43-43 Comment E-22: (Page 4-72, 4.5.6 Conclusion -- Vegetation)  
Once again, the DEIS concludes that an impact will not be significant based on incomplete or faulty information. In this case, the conclusion is based on a right-of-way reduction of width from 110 feet to 100 feet, and on *"implementation of our recommendation to develop mitigation for upland forest impacts."* With the former, the assumption that reducing the cut from 110 feet to 100 feet will in any way whatsoever mitigate the impact of fragmenting an interior forest is clearly faulty. With the latter, the DEIS bases its conclusion not on a thoughtful review of a mitigation plan, but rather on the anticipated implementation of plans simply *to develop* a mitigation plan! Obviously, a plan that has yet to exist can not be reviewed, and any conclusion herein reached is completely absent any foundation or basis.

Comment E-23: (Page 4-87, 4.6.1.5 Conclusion -- Wildlife)  
As with the previous comment, the DEIS bases a conclusion of insignificant impact on wildlife resources upon the insignificant reduction of the right-of-way width from 110 feet to 100 feet, and on the anticipation of a mitigation plan that doesn't yet exist. This is completely contrary to the intent of NEPA and all accepted NEPA practices.

CO43-44 Comment E-24: (Page 4-109, 4.8.1.1 Environmental Setting)  
The last paragraph in this section identifies still further information that is missing from the DEIS, citing "undetermined impacts" relative to the installation of access roads for meter stations and the installation of cathodic protection. While not identifying what cathodic protection entails, it notes it will encompass another "only" one to two acres at undisclosed locations at the ends of the pipeline, and smaller amounts at undisclosed locations along the length of the pipeline. While the DEIS "recommends" that Constitution provide information regarding these impacts, it seems to accept that for at least the cathodic beds that this may not happen until after the pipeline project is completely approved, noting that it can be handled via a post-approval variance process.

This makes no sense. As this seems to be a necessary component of the pipeline operation, it must necessarily be included in this NEPA review, especially if it involves multiple acres and locations. To do otherwise would constitute an illegal segmentation of components of the same project.

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CO43-42 See the responses to Dr. Blossey's letter in comments CO24-1 through CO24-4.

CO43-43 See the response to comment FA4-29.

CO43-44 See the response to FA6-11 regarding access roads for the proposed meter stations. See section 2.1 of the EIS for updated information on the cathodic protection beds.

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# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

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CO43-45

Comment E-25: (Page 4-111, 4.8.1.2 Pipeline Facilities/Appendix D)

In this section, the DEIS describes the width of the easement to be used, noting a standard of 110 feet wide, reduced to 100 feet in interior forest and to 75 feet within wetland areas. However, the DEIS also notes what it describes as "various extra workspaces" that will require disturbances beyond the widths described. It further notes that Constitution has identified "several" areas where site-specific conditions require these modifications, which are listed in Appendix D. The choice of wording certainly would lead the reader to believe that these locations are few in number, and scattered in different locations spread out along the length of the pipeline. However, an inspection of Appendix D finds that the number of these extra workspaces totals 575, scarcely a number that is typically described as "several". Over the entirety of the 124.4 mile length of the project, this number averages out to more than 4.6 workspaces per mile, encompassing an additional area of disturbance that adds up to 107.4 miles. The language in the DEIS is misleading, and even gives the appearance of minimizing the importance of this additional impact. The language of the DEIS needs to be understandable and precise, neither minimizing nor exaggerating the relative information being analyzed and disclosed.

CO43-46

Comment E-26: (Page 4-111, 4.8.1.2 Pipeline Facilities/Appendix D)

Of these additional workspaces, more than one is proposed on land owned by the Kernan Land Trust. A workspace proposed at MP 90.8 raises some confusion. Just west of the Kernan property line, Constitution had delineated the boundary of federal and NYSDEC regulated wetlands. The alignment sheets for the project indicate that the pipeline through that area is limited to an easement width of 75 feet, which is consistent with the wetland on the adjacent property. Then after remaining at that width for a short distance within the Kernan property, it widens to the standard 110 feet, narrowing a short distance later to 100 feet, which is consistent with the interior forest. So far, even though Constitution did not do a site survey or accepted the information provided by the Kernan Land Trust, it's not difficult to discern why those widths were chosen.

As indicated in Appendix D, a 50' x 100' work area is shown outside the southern edge of the 110-foot proposed easement in an area indicated in Appendix D as "UF", or upland forest. This area, however, is known to be occupied by wetlands that, once formally delineated, will be regulated by both the Army Corps of Engineers and the NYSDEC. The width of the easement in this immediate area does not reflect this fact because, presumably, Constitution has not recognized the presence of wetlands in this immediate area.

The confusion lies in the fact that in this area that Appendix D labels as upland forest, the justification for the workspace given by Constitution, and accepted by FERC without question, is labeled "I", which indicates a wetland crossing. The alignment sheets concur, with the workspace area identified as "ATWS Wetland Crossing". Indeed, the area chosen, which is entirely within the Kernan property, happens to be precisely at the location of a watercourse central to the wetland. This raises several questions. If Constitution does recognize the presence of wetlands on the Kernan property in an area that is otherwise unmapped, then why haven't they indicated so anywhere else in the DEIS? Why do they continue to indicate this area as upland forest? Why wasn't the preliminary delineation provided by the Kernan Land Trust accepted for purposes of their analysis? Why show that the pipeline is passing through wetland at this point, but not include the impact of crossing it in the calculated amount of impact? Why hasn't the easement width been reduced to 75 to reflect the presence of wetlands?

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As stated in appendix D of the EIS, the proposed extra workspaces would account for 107.4 acres rather than miles as stated by the commentor. As stated in appendix D, many of these areas would be needed due to road crossings, side slopes, steep slopes, utility crossings, waterbody crossings, and wetland crossings. As stated in the Executive Summary of the EIS, extra workspaces would account for 5.8 percent of the total acreage of the pipeline's impacts.

CO43-46

The workspace at MP 90.8 is labeled "wetland crossing" due to the crossing of wetland DE-IP-W128 as delineated just outside of the Kernan property boundary. Any wetlands within the Kernan property have not been delineated by Constitution due to lack of survey permission. If the project is certificated, then Constitution must survey all previously un-surveyed parcels, including the Kernan parcel, (access might have to be obtained in some cases), and these new field data would be used during permitting to supplant and refine the data originally obtained from desktop sources. This process may result in adjustments to the size, location, or shape of proposed workspaces. Therefore, if the construction right-of-way is currently identified as either 100 or 110 feet wide indicating its presence within uplands (as determined by desktop data due to lack of survey access), this width may later be adjusted based on field data to be consistent with wetland requirements (i.e., 75 feet wide).

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# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

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Ms. Kimberly D. Bose  
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CO43-47 | Comment E-27: (Page 4-202, 4.13 CUMULATIVE IMPACTS)  
"Constitution has proposed to place its project into service in March 2015, and would seek approval to begin construction as soon as all necessary federal approvals can be obtained."  
This statement ignores the need for the project sponsor to also obtain a series of permits from New York and Pennsylvania.

CO43-48 | Comment E-28: (Page 4-214, 4.13.1.1 Marcellus Shale Development - Background)  
"Development of the Marcellus Shale natural gas resource is not the subject of the EIS nor is the issue directly related to the proposed projects. Production and gathering activities, and the pipelines and facilities used for these activities, are not regulated by the FERC but are overseen by the affected region's state and local agencies with jurisdiction over the management and extraction of the Marcellus Shale gas resource."  
With this statement, the DEIS does not consider the growth-inducing aspect of the proposed pipeline. The presence of the pipeline would likely represent a more effective, efficient, and economical way for natural gas produced in that region of Pennsylvania to be transported to market. Some land available for fracking may not have been viewed previously as potentially profitable, but that circumstance could change dramatically with the new pipeline. The pipeline could very likely spur more development of natural gas fracking activities in northern Pennsylvania.

In somewhat similar fashion, the pipeline will cause other parties to want to build gathering and distribution lines to the new pipeline, especially in New York. This could potentially spur growth at key junctures, and may even inspire new residential and/or commercial construction.

The consideration of a project's impact on inducing growth, which may be positive or negative, is a fundamental component of a SEQRA analysis.

### CO43-49 | F. CONCLUSIONS

Comment F-1: (Page 4-214, 4.13.1.1 Marcellus Shale Development - Background)  
"We determined that construction and operation of Constitution's and Iroquois' projects would result in adverse environmental impacts. These impacts would occur during both construction and operation of the projects and occur on vegetation and individual wildlife species. However, if the proposed projects are constructed and operated in accordance with applicable laws and regulations, the mitigating measures discussed in this EIS, and our recommendations, these impacts would be reduced to less than significant levels."

Throughout the DEIS, the authors repeatedly make the same generalized statement; there will be adverse impacts, but they will be mitigated to less than significant levels. This same sentiment is expressed in such a way, lacking completed data, lacking the development of mitigation plans, even lacking the full extent of development plans, that the only basis whatsoever for this conclusion appears to be a faith in the concept that given enough time and "employment of proper measures", any impact can be mitigated to a less than significant level. It is a false belief. If it were true, there would be no need for a NEPA process, no need for decision making. Every project ever proposed would be approved. It would simply have to adhere to best management practices and follow proper guidelines. Unfortunately, that is not the case, and there are times that projects should be denied, or cut back, or rerouted to avoid resources where the impact just can not be mitigated.

Hudson Highlands Environmental Consulting 71 Colonial Avenue, Warwick, NY 10990 (845) 986-5350

Page 24

CO43-47 | Section 2.3.2.6 of the EIS has been revised.

CO43-48 | See the response to comments FA4-45 and CO26-11 regarding induced development.

CO43-49 | As stated in section 1.3 of the EIS, the FERC granted Constitution's request to enter pre-filing on April 16, 2012. The purpose of the pre-filing process is to encourage the early involvement of interested stakeholders, facilitate interagency cooperation, and identify and resolve issues if possible before an application is filed. Constitution filed its application on June 13, 2013. During this almost 14-month-long period, the FERC staff reviewed and evaluated Constitution's planned project prior to the formal application being filed. Our continuing review as part of the NEPA process resulted in or facilitated further alignment changes, modification of aboveground facilities, additional mitigation, and avoidance of certain resources.



# COMPANIES AND ORGANIZATIONS

## CO43 – Hudson Highlands Environmental Consulting (cont'd)

20140408-5025 FERC PDF (Unofficial) 4/7/2014 5:32:09 PM

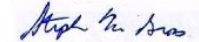
Ms. Kimberly D. Bose  
April 7, 2014

CO43-49  
(cont'd)

Such is true of the Charlotte Forest and its three NYSDEC regulated wetlands, two of which are so notable in their characteristics that they have caught the attention of the highest New York State environmental officials and experts, as well as the State University of New York, who is seeking to use this land for an outdoor classroom. The fragmentation of this interior forest can not be mitigated. Once the damage is done, it is irreversible. The thought that it could be mitigated in any way by a slight 9% reduction in the width of the easement is ludicrous. Likewise, trees that have taken generations to grow, and will be cut down within the non-operational part of the easement will not simply regenerate themselves within anyone's lifetime. Yet, the DEIS considers this impact to be temporary, and subtracts it from the calculations of long term impacts. Similarly, experts have refuted the assertion that invasive species can be controlled or eliminated once they become introduced. That alone could permanently destroy what is so remarkable about the Charlotte Forest, Mud Pond, and Clapper Lake. With generations of careful management, they all have withstood being infected by these foreign invaders. These potential impacts would be permanent, are very significant, and no mitigation could possibly reduce them to less than significant levels.

Thank you for your attention to my comments. I am available to the Commission should you wish to discuss any of the above.

Sincerely yours,



Stephen M. Gross  
Principal

cc: Army Corps of Engineers  
Henry S. Kernan Land Trust  
Carolyn Elephant, Esq.  
Patricia Desnoyers, NYSDEC

*Hudson Highlands Environmental Consulting 71 Colonial Avenue, Warwick, NY 10990 (845) 986-5350*


# COMPANIES AND ORGANIZATIONS

## CO44 – New York State Council of Trout Unlimited

20140408-0053 FERC PDF (Unofficial) 04/07/2014

NEW YORK STATE COUNCIL OF TROUT UNLIMITED

**ORIGINAL**



7 Helen Street  
Plattsburgh NY 12901  
4 April 2014  
[Wellman1985@charter.net](mailto:Wellman1985@charter.net)

Subject: Resubmission of Petition to Intervene, Constitution Pipeline CP13-499 (PF 12-9)

Ms. Kimberly Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street NE  
Washington DC 20426


CO44-1 Dear Secretary Bose:

On 8 July 2013, the New York State Council of Trout Unlimited (NYSCTU) submitted to your office a Petition to Intervene in the matter of Constitution Pipeline Company, LLC, CP13-499 (PF 12-9). Apparently your office misfiled that Petition, as we are not carried on the Service List for this matter.

Therefore, to correct the record and obtain party status, I am herewith submitting a new Petition to Intervene (enclosed) as well as a copy of the original Petition to Intervene. The reasons for intervention are set forth therein.

Please contact me immediately at the email address above if for any reason your office does not accept the new Petition to Intervene.

Sincerely,



William H. Wellman, Hydro Committee Chair, NYSCTU

CC: Service List  
TU: NYSCTU: Urban, Dunlap, TU Nat: Moore  
DEC: Little, Hulbert  
FWS: Patch

FILED  
SECRETARY OF THE  
COMMISSION  
2014 APR -1 P 1:23  
FEDERAL ENERGY  
REGULATORY COMMISSION

*America's Leading Coldwater Fisheries Conservation Organization*  
Washington, D.C. Headquarters: 501 Church Street, Northeast • Vienna, Virginia 22180 • 703-281-1100

CO44-1

The commentor's statements requesting intervenor status are noted. The Commission will make a determination on whether to grant a party's intervention status. The commentor has been added to the distribution list as an intervenor.


S-723

# COMPANIES AND ORGANIZATIONS

## CO44 – New York State Council of Trout Unlimited (cont'd)

S-724

20140408-0053 FERC PDF (Unofficial) 04/07/2014



**NEW YORK STATE COUNCIL OF TROUT UNLIMITED**

7 Helen Street  
Plattsburgh NY 12901  
4 April 2014  
[cwellman1985@charter.net](mailto:cwellman1985@charter.net)

**PETITION TO INTERVENE: PROJECT CP13-499 (PF 12-9)  
CONSTITUTION PIPELINE COMPANY, LLC**

Ms. Kimberly Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street NE  
Washington DC 20426

CO44-1  
cont'd

Pursuant to Rule 214 of the Rules, Practices and Procedures (18 CFR Section 385.314) and in accordance with the Regulations set forth in the Natural Gas Act 18 CFR 157.10, the New York State Council of Trout Unlimited hereby petitions the Federal Energy Regulatory Commission to grant it full party status in the above-captioned proceeding. The persons to whom communications should be addressed and to whom service should be made are as follows:

William H. Wellman 7 Helen Street Plattsburgh NY 12901 <a href="mailto:wellman1985@charter.net">wellman1985@charter.net</a>	Katy Dunlap 6281 Cayutaville Road Alpine NY 14805 <a href="mailto:kdunlap@tu.org">kdunlap@tu.org</a>
Roger Olson 370 Lexington Ave New York, NY <a href="mailto:RDO@RogerOlsonLaw.com">RDO@RogerOlsonLaw.com</a>	

As grounds for this Petition, the New York State Council of Trout Unlimited (NYSCTU) states as follows:

The New York State Council of Trout Unlimited consists of 36 Chapters and over 7,600 members across New York State. As America's foremost cold-water

*America's Leading Coldwater Fisheries Conservation Organization.* 1  
Washington, D.C. Headquarters: 501 Church Street, Northeast • Vienna, Virginia 22180 • 703-281-1100

# COMPANIES AND ORGANIZATIONS

## CO44 – New York State Council of Trout Unlimited (cont'd)

20140408-0053 FERC PDF (Unofficial) 04/07/2014

CO44-1  
cont'd

conservation organization, Trout Unlimited has a vital interest in the preservation of America's and New York's fisheries and habitat. The Council is a frequent intervener in matters of this nature, and has established a reputation for providing sound counsel and advice to regulatory agencies and other parties.

Further, the proposed route and construction of the Constitution Pipeline will cross and impact numerous waterways, creeks and rivers, many of which harbor native trout and other species of special interest to the Council and to conservationists in general. Members of Trout Unlimited are residents of and anglers in the waters impacted by the proposed development, and fish and enjoy the recreational benefits inherent in the area. Thus, no other party can represent Trout Unlimited's interests in this matter.

Neither disruption to the proceedings nor any additional burden to any party will result from the granting of this Petition. In light of the foregoing, the New York State Council of Trout Unlimited respectfully petitions for full party status.

Sincerely,



William H. Wellman, Hydro Committee Chair, New York State Council of Trout Unlimited

CC: (electronically)

Service List

TU: TU Nat, NYSCTU, PaCTU

DEC: Little, Hulbert

FWS: Patch

# COMPANIES AND ORGANIZATIONS

## CO45 – Bluestone Pipeline Company

DTE Energy Company  
One Energy Plaza, 688 WCB  
Detroit, MI 48226-1279



April 7, 2014

By e-Filing

Ms. Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, DC 20426

Re: *Proposed Constitution Pipeline Project, FERC Docket No. CP13-499-000*

Dear Secretary Bose:

CO45-1

Bluestone Pipeline Company of Pennsylvania, LLC (“Bluestone PA”), Bluestone Gas Corporation of New York, Inc. (“Bluestone NY”) and Susquehanna Gathering Company I, LLC (“SGC”) (collectively, the “Bluestone Companies”) respectfully submit their comments on the draft Environmental Impact Statement (“DEIS”) that the Federal Energy Regulatory Commission (“Commission”) Staff issued with respect to Constitution Pipeline Company, LLC’s (“Constitution”) Application for Certificate of Public Convenience and Necessity authorizing the construction and operation of the Constitution Pipeline that was filed on June 13, 2013 (the “Application”).

The Bluestone Companies are intervenors in the above-referenced proceeding and previously submitted comments on the Application (“Bluestone Comments”).<sup>1</sup> As stated in those comments, the Bluestone Companies generally support the Constitution Pipeline, especially the portion of the Constitution Pipeline that runs from Millennium to Iroquois. They also support the development of new facilities necessary to connect Pennsylvania and New York shale gas with downstream markets. However, the Bluestone Companies submitted comments for the primary purpose of ensuring that they can continue to meet the needs of their customers at the pace and with the quality and responsiveness of service that customers expect.

<sup>1</sup> Motion to Intervene and Comments of Bluestone Pipeline Company of Pennsylvania, LLC, Bluestone Gas Corporation of New York, Inc. and Susquehanna Gathering Company I, LLC (July 17, 2013, Accession No. 20130717-5305).

CO45-1

The commentator’s general support of the proposed projects is noted. As stated in section 2.3.1 of the EIS, Constitution’s project would cross underground utilities in numerous locations. Prior to construction, Constitution’s contractors would contact the “Call Before You Dig” or “One Call” system, or state or local utility operators, to verify and mark all underground utilities (e.g., cables, conduits, and pipelines) along the pipeline route to minimize the potential for accidental damage during construction. As stated in section 4.12.1 of the EIS, Constitution indicated it would reimburse the landowner for any loss or damage to their property as a result of an incident with the operation of the proposed pipeline. According to Constitution, compensation would include but is not limited to, replacement, repair, rental, or straight compensation for the damage.

# COMPANIES AND ORGANIZATIONS

## CO45 – Bluestone Pipeline Company (cont'd)

S-727

CO45-1 cont'd	<p>To the extent that the Bluestone Comments are not addressed in the DEIS, the Bluestone Companies reiterate those comments here by reference. In particular, and without limiting the foregoing, the Bluestone Companies request that the following conditions be included in any Certificate of Public Convenience and Necessity ("Certificate") that the Commission issues to Constitution for the Constitution Pipeline:</p> <ul style="list-style-type: none"> <li>• Constitution shall consult and coordinate with Bluestone Pipeline Company of Pennsylvania, LLC, Bluestone Gas Corporation of New York, Inc. and Susquehanna Gathering Company I, LLC (together, the "Bluestone Companies") to minimize damage to, and need for temporary shutdown of, the Bluestone Companies' existing pipeline facilities due to Constitution's pipeline construction activities. Constitution shall be responsible (either directly or by reimbursement) for the repair of damaged pipeline facilities owned by the Bluestone Companies and shall compensate the Bluestone Companies for losses and/or damages they incur due to any curtailment of service on the Bluestone Companies' pipeline facilities caused by Constitution's pipeline construction activities.</li> </ul>
CO45-2	<ul style="list-style-type: none"> <li>• Constitution shall revise its blasting plans to (1) provide that it will not engage in blasting activities within 300 feet of existing pipeline easements held by the Bluestone Companies without the prior approval of the Bluestone Companies unless it has entered into a mutually-agreed upon alternative arrangement with the Bluestone Companies; and (2) specify how Constitution will meet applicable safety standards when engaging in blasting activities within 300 feet of existing high density polyethylene pipelines.</li> </ul>
CO45-3	<ul style="list-style-type: none"> <li>• Constitution shall cooperate with the Bluestone Companies in areas where both are constructing pipeline facilities, including, where necessary, granting Bluestone Companies' reasonable requests for crossings and/or co-location of new gathering facilities with Constitution easements/facilities within two (2) weeks of receipt of such requests. If Constitution fails to respond to the Bluestone Companies within two (2) weeks of receipt of a request for crossing or co-location, then the request will be deemed approved.</li> </ul>
CO45-4	<ul style="list-style-type: none"> <li>• Constitution shall file updated alignment sheets that clearly indicate whether and where the Constitution Project will be built within or adjacent to the Bluestone Companies' existing rights-of-way where applicable. To the extent physically feasible, Constitution will locate its pipeline facilities such that the outside edge of Constitution's easement is at least fifty (50) feet from the center line of the closest existing Bluestone System facilities or, to the extent Constitution cooperatively shares its easements with the Bluestone Companies, such that the center line of the Constitution pipeline facilities is at least fifty (50) feet from the center line of the closest existing Bluestone System facilities.</li> </ul>
CO45-5	<ul style="list-style-type: none"> <li>• Constitution personnel in the field shall clearly identify themselves as affiliated with Constitution and/or Williams at all times such that local constituents are</li> </ul>

CO45-2	<p>As stated in section 4.1.5 of the EIS, adjacent pipelines would be manned at valves in case of an emergency during blasting operations. As stated in Constitution's Blasting Plan (Attachment 10 of their New York ECP <a href="http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14160901">http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14160901</a>), "All necessary "one calls" will be placed a minimum of 72 hours prior to blasting activities or as required by one-call system(s). All property owners would be notified of impending construction before any right-of-way work related to blasting is performed. Constitution's contractor would be required to submit a detailed site-specific Blasting Specification Plan for each section of the project where blasting operations are necessary. The site-specific plan must include details regarding distance and orientation to nearest underground structure, including pipelines.</p>
CO45-3	<p>The commentator's request is noted. However, the details regarding cooperation by Constitution and Bluestone Companies regarding future collocation or other similar technical matters would be determined by negotiations between the two firms, not by the FERC. Bluestone Companies pipelines in the area are not subject to the jurisdiction of the FERC; therefore, we have no authority over siting of its pipelines.</p>
CO45-4	<p>As stated in table 2.2.1-1 of the EIS, the proposed pipeline would be adjacent, but not within Bluestone's existing 50 foot easement. Alignment sheets can be found at <a href="http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14160901">http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14160901</a>. If approved, final alignment sheets will be filed prior to construction in Constitution's Implementation Plan.</p>
CO45-5	<p>The commentator's statement regarding Constitution personnel is noted. During construction, an interested party may directly inquire the company affiliation of the crew from construction personnel. The commentator's request for its proposed conditions to be included is noted.</p>

COMPANIES AND ORGANIZATIONS

CO45 – Bluestone Pipeline Company (cont’d)

CO45-5  
cont'd

aware that there are unaffiliated pipelines working simultaneously in the area and know to whom to address questions or issues that may arise from Constitution’s activities.

The Bluestone Companies note that none of these proposed conditions are referenced in the mitigation measures that the Commission Staff recommended in Section 5.2 of the DEIS. The Bluestone Companies request that, if these proposed conditions are not seen to be appropriate for listing as one of those mitigation measures, that they be included in any Certificate issued to Constitution in this proceeding.

Thank you for your attention to this matter.

Respectfully submitted,

*/s/ Matthew P. Misiak*  
Matthew P. Misiak  
Attorney for  
The Bluestone Companies

# COMPANIES AND ORGANIZATIONS

## CO46 – Schenevus Central School

20140408-0115 FERC PDF (Unofficial) 04/08/2014

### SCHENEVUS CENTRAL SCHOOL

THOMAS G. JENNINGS  
Superintendent  
COLEEN M. LEWIS  
Pre-K-12 Principal

ANDREW S. DRAPER C.S.  
159 MAIN STREET

KRISTEN M. SHEARER  
Guidance Director  
ROSE C. SHULGAY  
District Treasurer

Kimberly D. Bose, Secretary  
The FERC  
88 First Street NE, Room 1A  
Washington, DC 20426

  
SCHENEVUS, NEW YORK 12155  
PRINCIPAL: (607) 638-5881  
SUPERINTENDENT: (607) 638-5530  
FAX: (607) 638-5600

ORIGINAL

RE: Docket Nos. CP13-499 and CP13-502

CO46-1 Dear Ms. Bose:

Thank you for the opportunity to provide comment on the Constitution Pipeline construction yard planned for NYS Route 7, Schenevus, NY.

We, the Board of Education of the Schenevus Central School District, have concerns regarding road safety for our students, whether transported by bus, by personal vehicle or walking to and from our facilities. The concerns arise from the presence on the communities' roadways of multiple large commercial vehicles transporting large commercial items (e.g., pipes of wide girth and great length). We respectfully request that these concerns be addressed satisfactorily as a condition of permit issuance.



Thomas Jory, President

Schenevus Central School District Board of Education

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2014 APR - 8 P 2:54  
FEDERAL ENERGY  
REGULATORY COMMISSION

CO46-1

Impacts on traffic are discussed in section 4.9.4 of the EIS. The pipeline would be located approximately 5 miles south of the Schenevus Central School. Interstate 88, which likely will be a major conduit for construction-related traffic is also south of the school. Additionally, proposed contractor yards in Oneonta and Davenport, New York are also well southwest and south of the school. Given the proximity of the contractor yards, I-88, and the construction right-of-way to each other, well away from the school, we conclude that extensive truck traffic would not be expected near the school.



# COMPANIES AND ORGANIZATIONS

## CO47 – Concerned Citizens of Trout Creek

S-730

20140407-5059 FERC PDF (Unofficial) 4/6/2014 6:46:39 PM

Howard L Hannum, Sidney Center, NY.  
Concerned Citizens of Trout Creek  
1221 Higley Rd  
Sidney Center, NY 13839

April 6, 2014

Ms. Kimberly D Bose, Secretary  
The FERC  
888 First Street, NE  
Washington D.C. 20426

US Army Corp of Engineers  
New York District CENAN-OP-R  
Upstate Regulatory Field Office  
1 Buffington Street, Bldg. 10, 3rd Flr  
Watervliet, New York 12189-4000

RE: Docket Nos. CP13-499 and CP13-502, NAN-2012-00449-UBR

CO47-1 Comment to FERC on the Draft EIS document in regard to the Accident/Safety record of Williams Partners, LLC; the company in charge of building this pipeline.

The Concerned Citizens of Trout Creek is a group of taxpaying landowners that live along the proposed pipeline route. We call ourselves a group of adjacent landowners in that our members reside from 3 to 10 miles away from the proposed route.

The CCTC feels that Safety is the number one concern for this project. The protection of our youth, seniors and animals and any living species that depends on us for just that, SAFETY and depends on our protection, should be the number one concern with the Draft EIS and the project in general. The Draft EIS fails to list any accidents of record with the Williams Partners. The Draft EIS fails to list their violations. The Draft EIS fails to inform the public, the very citizens that live along the proposed route, the very citizens that the FERC is prepared to let land be TAKEN from by this company; of the Williams Partners A record.

Here at CCTC we have done an in-depth search on the accident record of this company and we have found more than 35 major accidents, more than 25 explosions and more than 125 violations costing countless thousands of dollars. We have only searched as far back as 1999 and we are sure there are much more and we did not list them, because we are limited in space and comment characters.

Here at CCTC we expect the FERC to address the single most important concern of our group, SAFETY. We expect the FERC to list the accident record of this company and print the follow-up investigation results. We expect the FERC to list the violations record of this company and print the follow-up investigation results. We expect to see all Williams and Williams Partners and Williams affiliates to appear on this record. We would like the FERC to re-do this document and supply the information in order to inform EMS and prepare for proper procedures and have proper SOP in place to deal with possible explosions. As I right this comment, I am being told by a colleague that another Williams owned pipeline has just exploded in West Virginia.

We demand and expect the Accident/Safety records of all Williams Partners and their affiliates.

Thank you in advance for your expected cooperation

CO47-1

The FERC takes the safety record of any particular pipeline company very seriously. To minimize the risk that future incidents may occur, the DOT is responsible for inspecting and taking enforcement actions on issues found with interstate pipelines. Since 2008, the DOT has significantly increased its inspection and enforcement personnel by 30 percent, enhancing its ability to ensure that operators are held accountable for complying with pipeline safety laws. The Pipeline Safety, Regulatory Certainty and Job Creation Act of 2011 (H.R. 2845), was passed by Congress and signed into law on January 3, 2012 by President Barack Obama. The Act does, among other things, give authorization for the DOT to hire additional pipeline inspectors. The agency is also taking other actions within its authority to improve pipeline safety, including recently requesting \$255.3 million for pipeline safety in the Administration's 2014 budget proposal to Congress to fund additional inspectors, increased coordination with state pipeline safety programs, and increasing pipeline inspections. See section 4.12 of the EIS regarding pipeline safety.

By signed agreement with the Office of Pipeline Safety (within the USDOT-PHMSA), the state inspects interstate gas and hazardous liquid pipeline operators in New York. Also, through certification by the OPS, the state inspects and enforces the pipeline safety regulations for intrastate gas and hazardous liquid pipeline operators in New York. This work is performed by the [New York Public Service Commission](http://primis.phmsa.dot.gov/comm/FactSheets/States/NY_State_PL_Safety_Regulatory_Fact_Sheet.htm). [http://primis.phmsa.dot.gov/comm/FactSheets/States/NY\\_State\\_PL\\_Safety\\_Regulatory\\_Fact\\_Sheet.htm](http://primis.phmsa.dot.gov/comm/FactSheets/States/NY_State_PL_Safety_Regulatory_Fact_Sheet.htm).

**COMPANIES AND ORGANIZATIONS**

**CO47 – Concerned Citizens of Trout Creek (cont’d)**

20140407-5059 FERC PDF (Unofficial) 4/6/2014 6:46:39 PM

CO47-1	Howard L Hannum- Co-Founder
cont'd	Concerned Citizens of Trout Creek

# COMPANIES AND ORGANIZATIONS

## CO48 – Concerned Citizens of Trout Creek

20140407-5061 FERC PDF (Unofficial) 4/6/2014 7:23:48 PM

Howard L Hannum, Sidney Center, NY.  
Concerned Citizens of Trout Creek  
1221 Higley Rd  
Sidney Center, NY 13839

April 6, 2014

Kimberly D Bose, Secretary  
The FERC  
888 First Street, NE  
Washington, D.C. 20426

US Army Corp of Engineers  
New York District CENAN-OP-R  
Upstate Regulatory Field Office  
1 Buffington Street, Bldg 10, 3rd flr  
Watervliet, New York 12189-4000

RE: Docket Nos CP13-499 and CP13-502

CO48-1 Comment to the FERC regarding the Draft EIS document and more specifically;  
truck routes through Delaware County, NY

The Concerned Citizens of Trout Creek is a group of adjacent landowners that live from 3 miles close to up to 10 miles away from the proposed pipeline route. Our group consists of seniors, youth, farmers and laborers. Retirees and high school athletes are part of our group as are snow mobile and 4-wheelers, hunters, hikers, fishermen and dog walkers. We have star gazers and day dreamers and we also have members that walk for health reasons.

It has come to the attention of our group that the Draft EIS document fails to list a truck route for the truck traffic coming into and leaving from Delaware County. This is a grave concern for our group as truck traffic will change some of our members lives forever. We are a group that yells at the school bus or the brown UPS truck if they drive too fast, and a constant variety of 18 wheeler construction trucks will not only tear up our roads but they will be making most of the aforementioned outdoor activity come to a stand still.

We would like the FERC to do its job and supply the citizens along the proposed route with a truck traffic plan. We request a Delaware County plan specifically. What roads will be traveled and for what hours of the day? Is the truck pattern going into an area going to be the same upon exit? How many vehicles can be expected in one 24 hour period in our county? We would like to request the ground level ozone study from these traffic patterns but we will fashion a separate comment for that.

If it means re-writing the document then so be it. This is a Safety issue and it must be addressed. And please give the public ample time to study the new document and then comment.

Thank you in advance for your expected cooperation

Howard L Hannum- Co-Founder  
Concerned Citizens of Trout Creek

CO48-1 Impacts due to truck traffic are discussed in section 4.9.4 of the EIS. See the response to comment CO16-29.

# COMPANIES AND ORGANIZATIONS

## CO49 – Unatego Area Landowners Association

This comment has been submitted twice by the same organization (4-7-14 and 4-14-14)

627 Flax Island Rd.  
Otego, NY 13825  
April 5, 2014

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street NE, Rm. 1A  
Washington, DC 20426

RE: CP13-499-000  
CP13-502-000

Dear Ms. Bose:

CO49-1

The Unatego Area Landowners Association (UALA), a three hundred family association of landowners in central New York, is in favor of gas development in New York. We also are in favor of the Constitution Pipeline that will service New York City and the Northeast.

The UALA is principally situated in Otsego County. Only one of our members is along the Constitution Pipeline's right-of-way. He has asked us to present this brief in his behalf.

Anyone who has ever dealt with real estate knows that there is no easy way to determine the "fair value" of a property. By its nature, "fair" is subjective. Usually its parameters are in the minds of the principals involved in the negotiation. In the end, the "fair price" is the price agreed upon by the buyer and seller.

To its credit in the DEIS, Cabot Williams strives to arrive at a fair compensation with landowners along the right-of-way, using criteria enumerated on page 4.141 of the document. The size of the tract, current value of the land, utilities and services available and accessible, current land use, and the values of adjacent properties are factors cited. We understand from our contacts with landowners affected that, in the main, Cabot Williams has considered these factors and adjusted some offers accordingly. However, Cabot Williams enters the negotiating relationship with a powerful advantage -- the power of eminent domain.

We recognize the necessity of the power of eminent domain -- that a

CO49-1

The commentor's statement in support of the proposed projects is noted. The commentor's statement regarding a rental agreement rather than an easement is noted. Compensation for landowners that would be affected by the proposed pipeline project is discussed in section 4.8.2 of the EIS.

# COMPANIES AND ORGANIZATIONS

## CO49 – Unatego Area Landowners Association (cont'd)

CO49-1  
cont'd

government can appropriate private property, with just compensation, in order to achieve a greater common good. We know that Kelso v. New London extends that right to private entities. However, there is another principle that should apply -- with great power comes great responsibility. It is under this principle that we make our argument.

In the DEIS Cabot Williams acknowledges that the presence of a pipeline can affect value. On pages 4.141 and 4.142 of the document, it states, "This is not to say that the presence of a pipeline, and the restrictions associated with a pipeline easement, could not influence a potential buyer's decision to purchase property. If a buyer is seeking a property for a specific use which the presence of a pipeline renders infeasible, then the buyer may decide to purchase another property more suitable for their objectives." However, the document then cites studies that show the effects of pipeline easements on sales and property values have little, if any impact. The studies cited are small, as is the entire literature in this area. For the most part, studies in this area have been sponsored by pipeline companies rather than independent entities. However, this is not the problem in these citations.

The problem is that research never accounts for the potential buyers who look at a property with a pipeline easement and just walks away. These potential buyers don't mention their motive to the seller. They don't mention it to the real estate agent. This segment of the population hasn't been identified and factored into the studies. Its' disengagement is a market force affecting the price and duration of sale. Until studies account for this segment of the buying population (not easy, but it can be done,) studies using current methodology contain a basic sample bias error that invalidate the findings.

Use common sense. Encumbrance. Disamenity. Impediment. All these terms are used in association with the word "easement." None of them are positive.

In summary, we understand that subjectivity is suspect and acknowledge Cabot Williams' attempt to use tract-specific variables in arriving at their version of a fair price. We applaud Cabot Williams' concession that a pipeline encumbrance could influence a potential buyer's decision to purchase a property. We ask the Federal Energy Regulatory Commission to encourage Cabot Williams to deal with this admission and turn the liability

S-734

## COMPANIES AND ORGANIZATIONS

### CO49 – Unatego Area Landowners Association (cont'd)

CO49-1  
cont'd

of an easement obtained under the power of law into an asset for the landowner. This could be done in the form of a rental agreement for the duration of the pipeline. This rental can then be passed from the current owner to a future buyer, thus providing the future buyer with an incentive rather than a disincentive.

It is not the purpose of this comment to speculate on the terms of such an agreement. My purpose is to advise FERC that landowners should not be considered an inconsequential means to what appears to be a very profitable enterprise. Cabot Williams has the responsibility to fully examine the rental option which mitigates the threat of seizure. They have the actuaries and the lawyers who can make sure that they are adequately protected both financially and legally.

Bryant La Tourette presented an outline in this regard at the Afton DEIS Hearing. Jim Worden, who represents about a hundred landowners along the right-of-way, including the member of the UALA for whom I am writing, also spoke at Afton. They have the particulars. Please accord them the courtesy of your full attention.

Thank you for your consideration of this matter.

Yours truly,



Richard Downey

cc: Senators Charles Schumer, Kirsten Gillibrand, Congressmen Chris Gibson, Richard Hanna, NYS Senator James Seward, NYS Assemblymen Clifford Crouch, Peter Lopez. Pennsylvania legislators to follow.

S-735

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust



*The Henry S. Kernan Land Trust & The Charlotte Forest* PO 317 / County Highway 40 / Worcester NY / 12197  
Trustees: H. Devereux Kernan / Catherine S. Kernan / Bruce D. S. Kernan / Christopher N. Kernan / Patricia McC. Kernan

SENT VIA ELECTRONIC FILING

Reference:

OEP/DG2E/Gas 4  
Constitution Pipeline Company, LLC  
Constitution Pipeline Project  
Iroquois Gas Transmission System, L.P.  
Wright Interconnect Project  
Docket Nos. CP13-499-000  
CP13-502-000

Ms. Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
Washington DC 20426  
Re: Docket No. CP13-499-000  
Constitution Pipeline

cc. US Army Corps of Engineers  
The FERC New York District, CENAN-OP-R  
888 First Street NE, Room 1A Upstate Regulatory Field Office  
Washington, D.C. 20426 1 Buffington Street, Bldg. 10, 3rd Floor

Dear Ms. Bose:

CO50-1

The Henry S. Kernan Land Trust is an intervener in these proceedings and on December 5, filed comments on the Resource Reports that had been submitted by Constitution. Our prior comments concerned the inevitable, irreversible and severe negative environmental impacts the siting of the proposed pipeline through the land of the Kernan Land Trust would cause specifically, especially on the pristine Clapper Lake – Mud Pond wetland complex.

We note that on page 4-125 FERC recommends that Constitution

“...further assess minor route deviations for tract NY-DE-226.000 (the Charlotte Forest) in coordination with the landowners and either incorporate a route that avoids the resources of concern or otherwise explain how potential impacts on resources have been effectively avoided, minimized, or mitigated.”

CO50-1

Section 3.4.3 of the EIS has been revised with new information regarding the Kernan Land Trust property and our assessment of potential impact avoidance, minimization, and mitigation measures.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-737

CO50-1  
cont'd We note that as of April 5, 2014, Constitution has taken no action to coordinate with the Kernan Land Trust and has not explained to or discussed with its trustees how it intends to comply with FERC's request that it avoid, minimize, or mitigate the negative environmental effects on the Clapper Lake – Mud Pond wetland complex.

We emphasize to FERC that both the New York State Natural Heritage Program and Dr. Sean Robinson, a professor and expert in wetland botany have emphasized the unique, pristine nature of the Clapper Lake – Mud Pond wetland complex. We also emphasize that Dr. Bernd Blossey, an international expert in invasive plant species from the NYS Invasive Institute has reviewed Constitution's proposed actions for controlling the spread of invasive species and concluded that they will be ineffective because there are no proven measures that could successfully avoid, minimize or mitigate the negative effects of the pipeline passing through and adjacent to the Clapper Lake – Mud Pond wetlands. Therefore, Constitution's only option to comply with FERC's recommendation in the DEIS is to make a deviation from its preferred route in order to avoid the Clapper Lake – Mud Pond wetland complex.

Following are our 127 separate and distinct comments on the DEIS organized by the sections of the DEIS and by page number.

### CO50-2 Executive Summary

#### 1. Comment 1 p. ES-2

That FERC concludes in the DEIS that the proposed greenfield route for the pipeline will cause less or equal negative environmental impact than the alternative non-greenfield routes is the single most significant and surprising, conclusion of the DEIS. The widely accepted, commonly understood, and obvious meanings of the terms greenfield and its opposite, non-greenfield would certainly suggest that a non-greenfield route would almost certainly cause less direct, indirect and cumulative negative environmental impacts than a greenfield route.

In fact, the proposed greenfield route crosses thin soils barely covering bedrock, cuts through forest blocks on steep, easily erodible hills, and traverses prime agricultural land. The principal reasonable alternative non-greenfield route (I-88 or M Alternative), by contrast, follows valleys filled with deep glacial till where the natural environment already has been extensively altered by the construction of an inter-state highway.

The Executive Summary of the DEIS should provide a clear, science-based, rational, unbiased explanation of why FERC came to the incongruous conclusion that if the pipeline were to be located on a greenfield route it would cause less or equally severe negative direct, indirect and cumulative environmental impacts than if it were to be located on the reasonable alternative non-greenfield routes.

The Executive Summary lacks such a clear, data-based, explanation. It is, therefore impossible for the public to comment adequately on the DEIS. FERC is responsible for ensuring that the public can understand and comment adequately on the DEIS. **The DEIS should be re-written so that it clearly states in a way the general public can easily comprehend why FERC concludes that of the proposed pipeline is constructed and operated through a greenfield**

CO50-2

The Executive Summary is high-level summary of the EIS; it is not intended to replace details, statements, and conclusions made throughout the EIS. A full analysis of the proposed route as compared to Alternative M, including sub-alternatives for alternative M segments, is included in section 3.4.1.2 of the EIS.



# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-738

CO50-2 cont'd	<b>route it will cause less direct, indirect and cumulative negative environmental impact than if it is constructed and operated on a <u>non-greenfield</u> alternative route.</b>
CO50-3	<p><b>2. Comment 2 p. ES-1</b></p> <p>The statement that the "... proposed projects will deliver up to 650,000 dekatherms per day..." is both internally inconsistent and inconsistent with other statements given by Constitution representatives about the pipeline's MAOP. In 17 places, the DEIS says that the capacity of the pipeline will be 650,000 Dth/d (e.g. pps 2 (x2, cover letter), ES-1, ES-10, 1-2 (x3), 1-3(x3), 2-6, 2-33, 3-2(x2), 3-13, 3-16(x2)). On page 2-32 and 4-203, however, the DEIS says that the capacity will be 850,000 Dth/d. The basis for an Environmental Impact Statement (EIS) is a reliable, factual description of the Proposed Action. <b>FERC should revise this section of the DEIS to make it consistent with the body of the DEIS and factual about the planned operating capacity for the pipeline.</b></p>
CO50-4	<p><b>3. Comment 3 p. ES-1</b></p> <p>The applicants should "...begin construction of their projects ...upon receiving all necessary federal authorization..." implies that construction can begin without the required state and local authorizations. <b>The DEIS should make clear that the applicants require all state and local authorizations before beginning construction of their project.</b></p>
CO50-5	<p><b>4. Comment 4 p. ES-2</b></p> <p>This section notes the many meetings that FERC and Constitution have held and the many notices they have sent to solicit public participation. It does not, however, indicate or provide evidence that <u>effective</u> public participation was achieved through FERC's and Constitution's meetings and notices. More than 60% of landowners along the route have refused to sign an easement agreement with Constitution. Statements made at the FERC meetings during the first week of April clearly indicate that most landowners are opposed to having the pipeline cross their land. The evidence is, therefore, that public participation has not been successful in achieving the support or understanding of the public for the pipeline. <b>This section of the DEIS should be revised to recount and analyze not just the actions related to public results but the actual effect of those actions in creating more public understanding and support for the proposed pipeline project.</b></p>
CO50-6	<p><b>5. Comment 5 p. ES- 3-4</b></p> <p>The DEIS lacks: (1) a formal slope stability analysis at MP 30.3; (2) geophysical feasibility studies for all trenchless crossing locations; (3) confirmation of whether Constitution will implement all of the listed potential mitigation measures for karst topography; (4) confirmation of whether Constitution will add a maximum allowable rutting depth of 4 inches in agricultural areas; (5) confirmation of whether Constitution will or not conduct agricultural restoration of New York agricultural parcels between October 1 and May 15. The DEIS thus states that it lacks information needed for FERC to be able to conclude that "...impacts on geological and soil resources would be adequately minimized." <b>The DEIS should be revised once the missing information is available and then should be re-submitted for public comment.</b></p>
CO50-7	<p><b>6. Comment p. ES-5</b></p> <p>The DEIS states that the conditions of COE and NYSDEC have not yet been formulated. The DEIS will be incomplete until any conditions imposed by the COE and the NYSDEC can be described. Until then it is not possible to comment adequately on the DEIS. <b>When the</b></p>

CO50-3 See the response to comment CO26-7.

CO50-4 The complete sentence in the Executive Summary states that "Constitution and Iroquois would seek approval to begin construction of their projects as soon as possible upon receiving all necessary federal authorizations." Further, section 1.5 states that Constitution and Iroquois would be responsible for obtaining all federal permits and approvals required to implement the proposed projects prior to construction regardless of whether they appear in table 1.5-1 of the EIS. The FERC does not issue authorization for construction until it has verified a project sponsor has obtained all applicable permits.

CO50-5 The projects were not proposed by the FERC. The FERC is the federal regulatory agency responsible for evaluating applications to construct and operate interstate natural gas pipeline facilities. The FERC is an advocate for the environmental review process and is not an advocate for the proposed projects. As an independent regulatory agency, it would be inappropriate for FERC to attempt to create support for a project. The FERC follows its guidelines to encourage public participation (e.g, meetings, notices, informational handouts, and brochures); see section 1.0 of the EIS. However, the extent to which any given landowner or public citizen supports the project or becomes involved with the environmental review process is a personal choice.

CO50-6 See the response to comment FA1-1.

CO50-7 Permit conditions that may be imposed by the COE, the PADEP, and the NYSDEC are not evaluated by the FERC. These conditions are the responsibility of those agencies. Their content and any notice to the public would be the responsibility of those agencies and is outside of the scope of the EIS..

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-739

CO50-7 cont'd	<b>conditions of COE and NYSDEC have been formulated they should be incorporated into the DEIS and the DEIS should be re-submitted for public comment.</b>
CO50-8	<b>7. Comment p. ES-5</b> The DEIS says, "The proposed project would impact four high-quality wildlife areas, including an area of potential timber rattlesnake habitat, a state forest and an Important Bird Area..." This statement implies that these four areas are the only "high-quality wildlife areas" along the proposed route of the pipeline. The previous statement, however, said that "Interior forests are quality habitat for wildlife and migratory birds" and that the project would impact "439.7 acres of interior forest, which indicates there are more than these four "high-quality wildlife areas" along the proposed route. <b>FERC should re-write this section to note accurately that there are more than four high-quality wildlife areas along the proposed route.</b>
CO50-9	<b>8. Comment p. ES-5</b> This section recommends that "Constitution develop an Upland Forest Mitigation Plan" to minimize impacts on interior forests. FERC has asked the public and various government agencies to comment on a DEIS that does not include a plan that FERC itself states as necessary in order to mitigate the impacts of the proposed pipeline on interior forest. <b>FERC should re-submit the DEIS for comments once this plan has been completed.</b>
CO50-10	<b>9. Comment p. ES-5</b> The section says, "Constitution could cause direct and indirect impacts on raptors and other migratory birds" but then only refers to bald eagles and a bald eagle mitigation plan, ignoring completely the other "raptors and other migratory birds". <b>FERC should re-submit the DEIS for comments once this plan has been completed.</b>
CO50-11	<b>10. Comment p. ES-5</b> The section recommends that Constitution not begin construction until "all remaining surveys and consultations with the applicable federal and state agencies are complete", until they "develop appropriate mitigation for special-status bat species", and "submit the remaining surveys for state-listed species". It then concludes that "impacts on state sensitive species would be avoided or adequately minimized." It is not possible for FERC to make this conclusion if the studies upon which such a conclusion must be based are not yet completed. <b>FERC should re-write this section once the studies that it says in the DEIS are necessary have been completed and base its conclusions on the results of those studies.</b>
CO50-12	<b>11. Comment p. ES-6-7</b> Invasive plant species are not mentioned in this section, although its title includes the word vegetation. This is an unacceptable oversight given that the proposed pipeline along its proposed <b>greenfield</b> route would irreversibly and inevitable cause the spread of aggressive introduced species, particularly into currently pristine wetlands.  Dr. Bernd Blossey is an international expert on invasive plant species, with thirty years of professional experience and supervisor of the Director of the New York State Invasive Species Research Institute at Cornell University. In a letter dated November 13, 2013, and provided to FERC, Dr. Blossey said,

"... construction equipment and opening up of intact plant communities, are major contributors to the success of invasive species...Nationwide assessments by the National

CO50-8	The Executive Summary has been revised to clarify the discussion was about agency or otherwise "designated" high quality wildlife habitats. We recognize that other areas along the proposed route could also contain high quality wildlife habitat.
CO50-9	See the response to comments FA4-29 and FA4-30.
CO50-10	The Executive Summary has been revised to clarify that the term "raptor" was used to describe bald eagles.
CO50-11	Typically for large projects, not all surveys are able to be completed prior to construction. For example, it is not possible for surveys to be completed on parcels where survey access has been denied by individual landowners unless the Commission certificates the project.
CO50-12	The Executive Summary has been revised to include an invasive species discussion. See the response to comment FA6-10 regarding long-term monitoring of the pipeline right-of-way for invasive species.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-740

CO50-12  
cont'd

Research Council have shown that restoration of degraded wetlands is nearly impossible and likely to fail... A student of mine and I have just completed a nationwide assessment of Phragmites management costs and we concluded that no success in controlling spread or abundance of introduced Phragmites was achieved despite expenditures of \$4 million annually by management agencies on herbicide control... Phragmites is occurring throughout your area and any construction activity will likely introduce propagules or clear the path for arriving propagules to establish and thrive further threatening the adjacent wetlands that have not been disturbed."

In a letter to FERC dated March 23, 2014 Dr. Blossey says,

"I have reviewed Section 4.5.4 **Noxious Weeds and Other Invasive Plant Species of the Draft Environmental Impact Study for the Constitution Pipeline and Constitution's Invasive Species Management Plans for New York State**. In my professional judgment, these documents neither describe nor propose any methodologies or procedures that would effectively prevent and control the spread of aggressive invasive species into the wetlands along the proposed pipeline route or maintain their infestations to below an acceptable level that would not unavoidably and irreversibly negatively affect the ecology and native plant species in these wetlands."

Dr. Sean Robinson, of the Biology Department of the State University of New York at Oneonta, and a specialist in aquatic plants, in a memorandum to FERC dated February 1, 2014 said:

"...Countless studies have shown the devastating impact that disturbances like this can have on ecological communities. The establishment of such pipelines has been found to be a major vehicle through which nuisance species invade natural communities. Phragmites and purple loosestrife, in particular, are aggressive problem species in our area that have been expanding their range through the dissemination of propagules by construction activities, and have been proven if not impossible to manage."

Yet this section of the DEIS on "Vegetation, Wildlife, Fisheries and Federally Listed and State-Sensitive" does not mention the issue of aggressive invasive species. **FERC should revise the DEIS to recognize that the construction and operation of the pipeline through pristine wetlands will inevitably cause the irreversible spread of aggressive introduced species and that many of these species cannot be effectively controlled by mechanical means or pesticide applications.**

CO50-13

### 12. Comment p. ES-7

The DEIS says that in two New York State Forests "Constitution would install the pipeline at greater depths to allow trees to grow back over the pipeline". If this is a methodology that Constitution intends to use, it should be described in the main body of the DEIS, not mentioned only in the ES. If this methodology is feasible then the DEIS should make clear why Constitution will not use it in other forested sections of the proposed route of the proposed pipeline. **The Executive Summary should be revised so that this reference to burying the pipeline deeper so that trees can re-grow over (1) summarizes the discussion of this methodology once it has been added to the appropriate sections of the main body of the DEIS; and (2) explains why this methodology will be used only on NYS forests.**

CO50-13

Deeper than standard burial of the pipeline in state forests was an impact minimization measure that Constitution initially evaluated, but has since removed from consideration at any location, due to technical in-feasibility. The executive summary has been edited to reflect Constitution's current proposal. We specifically asked Constitution if this impact minimization measure could be used on the Kernan Land Trust property in our environmental information request dated May 14, 2014. Constitution responded that a significantly larger amount of construction workspace, resulting in increased construction impacts, would be required to accommodate the deeper trench and associated soil stockpiles, negating any perceived benefits of the technique. We concur with this assessment.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-741

### CO50-14 | 13. Comment p. ES-8

The discussion here of “socioeconomics” is completely inadequate and is unsupported by the main text of the DEIS. The main text, for example, provides no evidence that operation of the projects would “have a minor to moderate positive effect on the local governments’ tax revenues due to the increase in property taxes that would be collected.” In fact, property values could well decline rather than increase since the value of land generally declines near to the infrastructure, such as pipelines, required for exploitation and transportation of oil and gas. If the “real potential” of these impacts is “unclear and would be likely be high variable” then FERC should clarify these impact and make them specific to certain areas before it presents the draft DEIS for public comment and before it gives a certificate to Constitution to construct its pipeline. **The DEIS should be revised to provide a thorough, reliable, data-based summary of the effects of the proposed pipeline on the socioeconomic situation of the region through which it will pass.**

### CO50-15 | 14. Comment p. ES-8

Because 25% of the pipeline route has not yet been surveyed, FERC has no basis for asserting, without any qualification, that “...twenty-six archaeological sites and 17 stone pile sites would be located within the proposed pipeline construction right-of-way”. **This section should be re-written to accurately describe the current knowledge of the archaeology along the proposed pipeline route, including the fact that more archeological sites may be located on the 25% of the route that has not been surveyed.**

### CO50-16 | 15. Comment p. ES-9

Constitution itself has refuted the conclusion here that “the applicants’ implementation of the above measures would protect public safety and the integrity of the proposed facilities” by its supplementary submission to FERC of its plan to build eleven 100 foot high transmission towers along the proposed pipeline route for the purpose of increasing the safety of the pipeline if power were cut to normal sources of communications. These eleven transmission towers are not mentioned in the DEIS as a proposed action. **Once the DEIS has been revised to include this new proposed action, this section of the ES should also be revised and the DEIS should be re-submitted for comment by affected parties.**

### CO50-17 | 1 Introduction

#### 16. Comment p. 1-1

The DEIS says, “Applicants would seek approval to begin construction as soon as possible after receiving all necessary federal authorizations”. **The DEIS should be revised to make clear that Applicants should begin construction only after receiving all New York State and federal authorizations, not just after receiving federal authorizations.**

### CO50-18 | 17. Comment 16 p. 1-2

NEPA requires the EIS to define and consider reasonable alternatives to the proposed actions. It is impossible to identify reasonable alternatives if the “need for the projects” has not been determined. **The DEIS should be revised to include a discussion of the need for the proposed action as a basis for establishing the alternatives that could meet that need and then a comparison of their predicted environmental impacts.**

#### 18. Comment p.1-2

The DEIS says,

### CO50-14

As stated in table 4.9.7-1 of the EIS, Constitution and Iroquois would pay almost 13 and 1.5 million dollars, respectively, in property taxes annually due to operation of the projects. Section 4.9.5 has been updated with new information concerning property values. The Executive Summary has been revised to clarify that the mention of highly variable statements was regarding property insurance. The potential impacts of the projects upon property insurance (including our recommendation to ensure that any impacts are mitigated) and mortgages are discussed in sections 4.9.6 and 4.9.5 of the EIS, respectively. These sections have been updated for the final EIS.

### CO50-15

See the response to comment FA4-3.

### CO50-16

See the response to comment SA2-1.

### CO50-17

See the response to comment CO50-4. As stated in section 1.5 of the EIS and in relation to table 1.5-1 which contains a list of federal, state, and local permits, “Constitution and Iroquois would be responsible for obtaining all permits and approvals required to implement the proposed projects prior to construction regardless of whether they appear in this table.”

### CO50-18

See the responses to comments CO42-7 and LA7-5.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-742

CO50-18  
cont'd

“According to Constitution, the proposed pipeline project was developed in response to natural gas market demands in the New York and the New England areas, and interest from natural gas shippers that require transportation capacity from Susquehanna County, Pennsylvania to the exiting Tennessee Gas Pipeline Company LLC and the Iroquois systems in Schoharie County, New York. The proposed project would deliver up to 650,000 dekatherms per day of natural gas supply from Susquehanna County, Pennsylvania to the interconnect with the TGP and Iroquois systems at the exiting Wright Compressor Station (to markets in New York and New England).;

Yet promotional material prepared by Iroquois about its SoNo Project says,

“The SoNo Project will utilize Iroquois’ NGA Section 3 and Presidential Permit authority to export gas to Canada. The level of interest expressed in this Open Season will determine the facilities to be constructed to physically flow gas north into Canada. ”

This material specifically identifies the proposed Constitution pipeline as a principal source of the natural gas it intends to export to Canada.

Identification and comparison of the environmental consequences of reasonable alternatives for achieving the objective of a proposed action is the core function of an EIS. Yet the DEIS incorrectly identifies the market for the proposed Constitution pipeline, as indicated by promotional material prepared by one of the two applicants for the certification for the Constitution pipeline. The reasonable alternatives cannot therefore be correctly identified. **The DEIS should be re-submitted for comments once it correctly identifies the market for the natural gas the proposed pipeline will transport and can therefore correctly identify reasonable alternatives to the proposed pipeline.**

CO50-19

### 19. Comment p 1-2

The DEIS says “...the proposed pipeline could provide natural gas service to nearby municipalities...” Yet Figure 2.1 and the maps in Appendix B clearly indicate that the proposed route actually avoids population centers and on page 2-1 the DEIS says, “The pipeline route generally follows a greenfield (i.e. lands and vegetation, including adjacent areas, that are undisturbed or undeveloped) pathway...”

The purpose of providing natural gas to nearby municipalities obviously could be fulfilled more cheaply and easily if the pipeline were located nearer to those municipalities rather than further away from them. Alternative M along and near to the I88 corridor passes close to all cities, towns and villages that the pipeline could supply. If Constitution argues that its pipeline is necessary to supply nearby municipalities then it should not propose a greenfield route far from those population centers. **The DEIS should be revised to explain why Constitution has proposed a greenfield route across the steep ridges away from population centers when at the same time it claims as a benefit from the project the ability to supply population centers with natural gas.**

CO50-20

### 20. Comment p 1-2

Footnote 5 says that a precedent agreement permits one or both parties to terminate the agreement if certain conditions are not met. The statement that the “...the proposed pipeline is

CO50-19

The Constitution pipeline was routed and designed to transport natural gas from supply areas in Susquehanna County, Pennsylvania to Schoharie County (Wright), New York, where the natural gas would then be connected to other, existing pipelines for delivery to downstream markets. It was not routed to supply local municipalities in between; however, this secondary opportunity is a possibility now being explored by Leatherstocking in coordination with Constitution. See the responses to comments SA4-1 and SA4-2 regarding alternative M.

CO50-20

As stated in the footnote, precedent agreements are binding contracts. However, if a proposed project was denied by regulatory or permitting agencies, then obviously the project could not be built and the precedent agreement would acknowledge such a circumstance.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont’d)

S-743

CO50-20  
cont'd

fully subscribed” therefore is inconsequential. The companies that subscribed could have done so simply to help Constitution meet FERC’s preference that a pipeline be fully subscribed. The public cannot know if the commitment is real or fictional, or at least easily subject to termination. **The DEIS should clearly explain the practical significance of the term “fully subscribed” in terms the public can understand and evaluate.**

CO50-21

**21. Comment p. 1-3**

On page 1-3 the DEIS states that Constitution has field surveyed approximately 534 of 707 land tracts or about 76 percent of the total number of tracts. On page 1-4 the DEIS states that “...a substantial number of the outstanding surveys for Constitution’s project... would have to be completed after issuance of the Certificate”. Twenty-four percent of the required field survey data are not yet available. It is then premature to draw the conclusion that “the construction and operation of the proposed pipeline project would not adversely impact any state-listed species”. To extrapolate from surveyed to un-surveyed tracks is not an acceptable methodology for determining the presence or not of state-listed species. Some of these species, which are rare species, are inherently likely to occur in only certain, restricted sites, and it is probably that many of these sites were not surveyed. **FERC should revise its conclusion to say that it is not yet possible to make a conclusion as to whether the proposed pipeline project would or would not adversely impact any state-listed species.**

**22. Comment p. 1-4**

Although 25% of the tracts have not been surveyed, the DEIS assumes that it is nonetheless possible to prepare an accurate DEIS. Yet the DEIS does not analyze the length of the pipeline route that remains to be surveyed, whether certain particularly critical parts of the proposed route, such as pristine wetlands have been surveyed, or the reasons why after two years 25% of the route remains unsurveyed. This is essential information for the affected public to make informed comments. **The DEIS should be revised and re-submitted for public comment once all the tracts have been surveyed and sufficient information is available to complete the DEIS.**

CO50-22

**23. Comment p. 1-4**

The effect of the pipeline on the use and value of private property that will be confiscated for the proposed pipeline is not in the list of the “factors upon which the Commission bases its decision to grant or not grant a license to Constitution for the construction and operation of the proposed pipeline. Yet FERC’s own policy statement from 1999 says that FERC must

“...determine whether the applicant has made efforts to eliminate or minimize any adverse effects the project might have on the existing customers of the pipeline proposing the project, existing pipelines in the market and their captive customers, **or landowners and communities affected by the route of the new pipeline...**” (bold added), and “If residual adverse effects on the three interests are identified, after efforts have been made to minimize them, then the Commission will proceed to evaluate the project by balancing the evidence of public benefits to be achieved against the residual adverse effects.”

Of the affected landowners, 25% have refused permission for surveys and over 60% in Delaware and Schoharie Counties have refused to sign an easement agreement with Constitution. Section 1.2.1 makes no mention of this resistance of landowners to permit surveys or sign easement agreements. The section **should be re-written to reflect adequately the FERC policy with**

CO50-21

See the responses to comments FA1-1, FA4-3, and CO50-11.

CO50-22

Section 1.2 of the EIS provides a summary of tracts for which there is no survey permission. Constitution indicated in an update that, “landowners have signed easement rights for over 50% of the right-of-way”. The specific reasons that an individual may or not choose to sign an easement are beyond the scope of the EIS.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

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CO50-22 cont'd	regard to the effect of a new pipeline on private property and to explain why so many landowners have refused to sign easement agreements with Constitution.
CO50-23	<p><b>24. Comment p. 1-3</b> Section 4.8.2 says,</p> <p>“If an easement cannot be negotiated with a landowner and if the projects are approved by the Commission, Constitution may use the right of eminent domain to acquire the property necessary to construct and operate its project.”</p> <p>This statement underlies the attempts Constitution has made to use the threat of eminent domain to intimidate landowners into signing easement agreements. The Kernan Land Trust lawyer found Constitution’s easement agreement to be completely unacceptable and advised the trustees not to sign it. Constitution was inflexible in all Kernan Land Trust attempts to negotiate a reasonable easement agreement. For example, the Kernan Land Trust lawyer asked that the right-of-way be “extinguishable”, so that if the pipeline were not built or did not cross trust land the easement would be terminated. Constitution refused, with no explanation. This section of the DEIS does not accurately convey: (1) how Constitution has used the power of eminent domain to intimidate landowners into signing easement agreements against their own best interests; (2) why Constitution is inflexible in the terms of its easement agreement; and (3) what motivates Constitution to insist on an “inextinguishable” right-of-way. <b>The DEIS should be revised so that it discusses and evaluate Constitution’s use of the threat of eminent domain to obtain easement agreements with landowners.</b></p>
CO50-24	<p><b>25. Comment p. 1-4</b> Section 1.2.2 notes that “... the U.S. Environmental Protection Agency is required to review and publically comment on the environmental impacts of major federal actions.” The EPA filed a request with FERC for an extension of the time to review the DEIS. <b>The FERC should either grant the extension EPA requests or explain clearly to the affected public its rationale for refusing this request.</b></p>
CO50-25	<p><b>26. Comment p.1-5</b> The DEIS states that it will not examine the need for the project. The <i>purpose</i> of the proposed pipeline cannot be defined if the <i>need</i> for the project has not been established. Until the <i>purpose</i> of the project has been defined <i>reasonable alternatives cannot be formulated</i> or evaluated for their comparative environmental consequences, as NEPA requires. <b>FERC should revise the DEIS when it is able to define the purpose and establish the need for the proposed pipeline and therefore able to define reasonable alternatives and compare their environmental consequences.</b></p>
CO50-26	<p><b>27. Comment p. 1-5</b> The DEIS has no sections about the New York State Department of Environmental Conservation (DEC) or local governments, although both these institutions have to give approvals for some of the proposed actions. <b>The DEIS should be revised to include the DEC and local governments’ role in the pipeline approval.</b></p>
CO50-27	<p><b>28. Comment p.1-6:</b> The description of the “informational open houses” here is misleading. We found the format of the “informational open houses” to be designed to <i>prevent</i> the attendees from obtaining a clear</p>

CO50-23	The commentor’s statements regarding Constitution’s threats of eminent domain are noted.
CO50-24	See the response to comment FA1-1.
CO50-25	See the response to comment LA7-5 and CO42-7. The project purpose and objectives help define the scope of the alternatives analysis, not the project’s purported need.
CO50-26	Section 1.2 of the EIS provides information regarding the agencies that participated in development of the EIS. Section 1.5 provides a list of permits and approvals that Constitution must obtain from the NYSDEC.
CO50-27	The commentor’s statements regarding the open houses are noted. As stated in section 1.3 of the EIS, Constitution, rather than the FERC, held the open house meetings. The FERC staff took the opportunity to attend these meetings and provide information about the FERC process, but did not organize or host the meetings.



# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

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CO50-27 cont'd	idea of the proposed project, discussing the project with each other and hearing answers from Constitution representatives to other attendees. We also have found that the DEIS has not addressed the substantive questions and concerns that we and others raised at these open houses. <b>The DEIS should be revised to note that we and many other landowners found the “informational open houses” uninformative and ineffective.</b>
CO50-28	<b>29. Comment p.1-6</b> The DEIS says 101 people attended three public scoping meetings, less than 10% of the affected landowners. This low percentage indicates failure of FERC’s consultation process. FERC is responsible for ensuring adequate public participation in scoping particularly of affected landowners. <b>FERC should design and implement a process of public consultation about the proposed pipeline that effectively involves a significant proportion of the affected population, especially affected landowners.</b>
CO50-29	<b>30. Comment p 1-6</b> The DEIS says FERC “conducted conference calls on an approximately bi-weekly basis with representatives from Constitution...” FERC, by contrast, organized only three consultation meetings with the general public and affected landowners. Members of the Kernan Land Trust, whose land the pipeline would traverse for almost a mile, received no telephone calls at all from FERC. The DEIS here clearly indicates that FERC staff has been using its time as public servants to help Constitution to build its pipeline rather than being concerned with protecting the rights and interests of the public in general and landowners specifically. <b>The DEIS should explain why FERC personnel felt it was reasonable and fair for them to devote so much time to its consultations with Constitution and so little time to consultations with the affected persons, in particular landowners.</b>
CO50-30	<b>31. Comment p 1-7</b> In 2013, the Kernan Land Trust proposed various alternative routes to Constitution. According to a letter from Ms. Linda Shubring, Constitution’s supervisor for environmental studies, to the Kernan Land Trust in the fall of 2013, by then it had become too late to make changes in the route. Her statement directly contradicts the statement here that “...alternative routes, both small and large, remained viable throughout the course of the project”. <b>The DEIS should address Constitution’s statement that by the fall of 2013 any significant deviations from its proposed route were unfeasible because it was too late to make changes in the route.</b>
CO50-31	<b>32. Comment p 1-10</b> Here FERC acknowledges that the DEIS is based on incomplete data and information and requests Constitution to supply additional essential data and information. Yet FERC draws conclusions based on this incomplete DEIS. <b>FERC should re-formulate its conclusions once the DEIS is complete and should re-submit the DEIS for public comment once it is complete.</b>
CO50-32	<b>33. Comment p 1-11</b> Table 1.5-1 indicates that 22 of required 34 permit/approval consultations were “on-going” when the DEIS was released for public comment. FERC therefore issued the DEIS and asked for public comments when 65% of the consultations it considers required and necessary had not yet been completed. If the information and data in these consultations are important to FERC, there is no reason to believe that they are not also important to the affected public. FERC evidently now intends to provide no additional opportunity for the affected people to comment on a

CO50-28

Section 1.3 states that 101 people commented at the three scoping meeting. This is not the number of persons in attendance. Section 1.3 further states that the notice of the scoping meetings was mailed to more than 2,100 interested parties, including federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American Tribes; affected property owners; other interested parties; and local libraries and newspapers. The extent to which any given individual wishes to participate in the environmental review process is a personal choice. The vast number of comments on the projects were received either by mail, or electronically.

CO50-29

The FERC staff typically conducts periodic conference calls with prospective applicants and permitting agencies during the pre-filing phase of projects (i.e., before an application is filed). The purpose of these calls is two-fold, to keep the FERC apprised of the status of a forthcoming application and to facilitate the identification and possible resolution of issues. Once an application is filed, regular conference calls generally do not continue. The FERC staff actively participated in seven open house meetings sponsored by Constitution and coordinated extensively with landowners, stakeholders, and the public in these meetings. In addition, the FERC also conducted four scoping meetings to solicit input from the public prior to publication of the draft EIS, and four more public comment meetings following publication of the draft EIS. Collectively, the FERC staff participated in 15 meetings with landowners and the public. The FERC staff also met directly with representatives of the Kernan Land Trust to discuss issues and toured the Kernan property. As also indicated in Kernan family comments (CO5) FERC staff spoke with members of the Kernan family on multiple occasions. See also the response to comments CO4-1 and CO4-2.

CO50-30

The commentator’s statements regarding alternative routes are noted. The FERC cannot comment directly on statements allegedly made by Constitution to the Kernan Land Trust. However, route alternatives and minor route variations are possible at any time during the environmental review process as evidenced by our May 14, 2014 environmental information request to constitution to assess multiple minor route variations near the Kernan land Trust property. The adoption of minor route variations is also possible post-Certificate and after the start of construction, although those scenarios are typically based on the discovery of unanticipated site-specific conditions along the right-of-way.



**COMPANIES AND ORGANIZATIONS**

**CO50 – Kernan Land Trust (cont’d)**

- CO50-31

See the response to comment FA1-1.
- CO50-32

See the response to comments FA1-1 and CO50-11.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

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CO50-32  
cont'd | complete DEIS. FERC should (1) re-submit its DEIS when the document contains the results of the 22 consultations that are still “on-going”; or (2) explain clearly why it believes that the public does not need to know the results of these consultations in order to comment on the DEIS; or (3) justify why it is necessary for FERC to approve the DEIS and issue a certificate of public convenience to Constitution within such a constricted time-frame that it is not possible to allow the affected public to comment on a DEIS that FERC itself admits is incomplete.

CO50-33 | **2 Proposed Actions**  
**34. Comment p 2-6**  
The statement that the remaining 1,105.2 acres of land disturbed by Constitution would be restored and “...allowed to revert to its former use...” ignores that it would take decades for this land to “...revert to its former use...” if at all. It also ignores that construction and the operation of the pipeline would irreversibly affect large areas to each side of the pipeline construction corridor itself. The construction and operation of the pipeline through the land belonging to the Kernan Land Trust, for example would irreversibly and unavoidably affect the Clapper Lake and Mud Pond wetland complex in and to the sides of the proposed pipeline route. As the DEIS itself acknowledges, the proposed route is a *greenfield* route that traverses large blocks of interior forest. Numerous ecological studies have shown that fragmentation of forest affects many species of bird and animal species, most of them suffering from a decline in populations precisely due to fragmentation of their forest habitats. **This section of the DEIS should be re-written so that it accurately evaluates the irreversible direct and indirect negative impacts that the construction and operation of the pipeline would cause on land use within and to each side of the construction corridor itself.**

CO50-34 | **35. Comment p 2-9**  
The statement “Constitution proposed a 75 foot wide construction right-of-way in most wetlands” yet “actual right-of-way configuration and widths would vary, in some cases beyond 125 feet wide considering...” does not explain the proposed actions adequately for people to be able to evaluate them. The public and affected landowners need to know the criteria that FERC will use to approve wider or narrower right-of-ways. **The DEIS should be re-written so that the general public and individual landowners can understand the proposed actions and evaluate for themselves their impacts on their land.**

CO50-35 | **36. Comment p. 2-10**  
The phrase “prior to construction” is unclear. Why does the DEIS not include the entire extra workspaces “...beyond those currently identified...”? It is not possible for the affected public or landowners to comment on the DEIS accurately when it is incomplete in these aspects. **The DEIS should be re-submitted for public comment once the extra workspaces have been identified and defined.**

CO50-36 | **37. Comment p. 2-10**  
The DEIS says, “According to information provided by Constitution, remotely controlled MLVs provide more real-time data and reliability than automatically controlled valves”. This statement indicates that FERC itself lacks the technical knowledge required to evaluate independently the information Constitution provides it bout MLVs. Moreover, according to supplementary information provided by Constitution on March 26, 2014, Constitution has added eleven, 100

CO50-33

Section 2 of the EIS describes the proposed action; it does not describe impacts. As stated in section 4.5.5 of the EIS, forested lands within the maintained right-of-way would be permanently converted to an herbaceous cover type. The EIS is clear that the regrowth of shrubs and trees within the temporary workspaces may take decades before these areas resemble the forest vegetation that was present before construction. See the response to comment CO1-4 regarding forest fragmentation.

CO50-34

Proposed right-of-way widths and extra workspaces are depicted on Constitution’s alignment sheets available at [http://elibrary.ferc.gov/0/idmws/file\\_list.asp?document\\_id=14160901](http://elibrary.ferc.gov/0/idmws/file_list.asp?document_id=14160901). Variable right-of-way widths, including a listing of reasons why the right-of-way may be expanded in certain locations, are discussed in section 2.2.1.2 of the EIS. We evaluate expanded workspace areas for both uplands and wetlands on case-by-case basis, including evaluation of road or utility crossings, need for spoil storage, steep topography, trenchless crossing workspaces, and other factors. Constitution’s proposed expanded right-of-way widths in wetlands are discussed in section 4.4.4 of the EIS.

CO50-35

The EIS discusses all extra workspaces that have been identified. As stated in section 2.2.1.3 of the EIS, additional extra workspaces could be identified just prior to the start of construction or during construction of the projects. Should Constitution request changes to the workspaces discussed in the EIS, it must file those for our review and approval. Changes to workspaces that arise after the start of construction would be handled via the FERC’s variance process (which includes a provision for landowner approval) as discussed in section 2.5 of the EIS.

CO50-36

The FERC does not design pipeline projects, which includes specification of the exact type of MLV to be used. We have the knowledge and expertise necessary to evaluate pipeline project components, including MLVs. We work with Pipeline and Hazardous Materials Safety Administration (the PHMSA) to ensure that all pipeline projects, including MLVs, are designed and built to the applicable laws, regulations, and safety standards. Because project design is the responsibility of the project sponsor, we solicit specific information from applicants such as Constitution to answer our own questions and address comments from other agencies and the public.

See the response to comment SA2-1 regarding the communication towers.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

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CO50-36  
cont'd

foot tall transmission towers along the pipeline route to its Proposed Actions. Therefore, the description of the Proposed Actions in the DEIS is now incomplete. The basis for an accurate, complete evaluation of the environmental consequences of a Proposed Action is an accurate, complete description of the Proposed Actions. FERC should re-write the DEIS to **provide a complete description of the Proposed Actions regarding the MLVs and transmission towers and its own independent, technically sound evaluation of the environmental effects, especially in relation to safety, of those proposed actions.**

CO50-37

**38. Comment p. 2-10**  
On March 18, 2014 Constitution confirmed that four delivery taps will be installed along the proposed route to provide local gas service. The DEIS does not state the installation of these taps as a Proposed Action. An EIS must describe fully and accurately all the Proposed Actions, in order to be able to evaluate accurately and completely their potential environmental consequences. The DEIS does not, therefore, provide an adequate basis for public comments on the DEIS or for decision-makers to take environmental considerations into account in their decisions. **FERC should re-write the DEIS to include ALL proposed actions and then fully analyze the predicted environmental consequences of those proposed actions.**

CO50-38

**39. Comment p 2-13**  
This section acknowledges that harmful spills and leaks could occur during construction. Other U.S. government documents (e.g. <http://primis.phmsa.dot.gov/classloc/faqs.html>) as well as numerous spills, leaks and explosions reported in the news, confirm that natural gas facilities are not free from spills, leaks and explosions. Nothing on this page indicates that Constitution thinks it can do anything more to prevent, avoid or mitigate such spills than plan "...spill and leak preparedness and prevention practices, procedures for emergency preparedness and incident response and training requirement". These words indicate that FERC itself believes that spills and leaks will occur during the construction and operation of the proposed pipeline. If a spill or leak were to occur during construction through the Clapper Lake – Mud Pond wetland complex on the Kernan Trust property the wetland would suffer from inevitable and irreversible negative impacts. The water in this wetland moves out very slowly, so contaminated water would stay in the wetland indefinitely, affecting its plant and animal life. Furthermore, neither Constitution nor the DEIS have acknowledged that these NYSDEC-regulated wetlands extend further into the Kernan Trust property than current maps indicate despite the fact that the Kernan Land Trust has provided documentation as to the presence and extent of these wetlands.. Should there be an "incident", no amount of "response" would be adequate. **FERC should re-write the DEIS to require Constitution to re-route the proposed pipeline route to avoid any risk of irreversible negative impacts on the fragile, pristine wetland Clapper Lake – Mud Pond wetland complex.**

CO50-39

**40. Comment p 2-14**  
Although the DEIS says, "Constitution's state-specific Invasive Species Management Plans are described in more detail in Section 4.5," Section 4.5 in fact only refers in general terms to Environmental Construction Plans. The ECP's consist only of maps of the location of invasive species found during a field survey, some general guidelines about control measures for and some botanical descriptions of some invasive plant species. They provide no specifics about how Constitution intends to control of invasive species but only generalities about the installation of washing stations at some undetermined sites and some spraying of herbicides and manual removal of plants for a period of three years after construction.

CO50-37 See the response to comment FA4-46.

CO50-38 Spills are a possibility with the construction of any pipeline project. See the response to comments CO7-2 and CO16-16. Section 3.4.3 of the EIS has been revised with new information regarding the Kernan Land Trust property (including the NYSDEC-regulated wetlands) and our assessment of potential impact avoidance, minimization, and mitigation measures.

CO50-39 See the response to comment FA4-9. The following text was included in section 4.5 of the draft EIS: "To minimize the potential spread of invasive species, Constitution has developed state-specific Invasive Species Management Plans in consultation with the applicable state regulatory agencies (the ADCNR, the NYSDEC, and the NYSDAM). The Management Plans contain measures designed to control invasive plant species during project construction and operation through limited use of herbicides, installation of wash stations to clean vehicles that have traversed infested areas, and rapid restoration and reseeding following installation of the pipeline, which would promote the establishment of desirable plant species and deter the spread of unwanted plant species. Constitution would also conduct yearly monitoring and apply herbicide, as needed. Following construction, if Constitution's operational site monitoring identifies unsuccessful revegetation or potential invasive species colonization, it would conduct additional vegetation management, such as herbicide application, manual removal of non-native vegetation, and consultation with qualified botanists. If deemed necessary, Constitution would use foliar herbicides along the right-of-way in accordance with agency regulations and manufacturer's recommendations to control potential invasive vegetation." See the response to comment FA6-10 regarding long-term monitoring of the pipeline right-of-way for invasive species.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-749

CO50-39  
cont'd

Dr. Bernd Blossey is an international expert on invasive plant species, with thirty years of professional experience and supervisor of the Director of the New York State Invasive Species Research Institute at Cornell University. In a letter dated November 13, 2013, and provided to FERC, Dr. Blossey says,

“... construction equipment and opening up of intact plant communities, are major contributors to the success of invasive species...Nationwide assessments by the National Research Council have shown that restoration of degraded wetlands is nearly impossible and likely to fail... A student of mine and I have just completed a nationwide assessment of Phragmites management costs and we concluded that no success in controlling spread or abundance of introduced Phragmites was achieved despite expenditures of \$4 million annually by management agencies on herbicide control... Phragmites is occurring throughout your area and any construction activity will likely introduce propagules or clear the path for arriving propagules to establish and thrive further threatening the adjacent wetlands that have not been disturbed.”

In a letter to FERC dated March 23, 2014 Dr. Blossey says,

“I have reviewed Section 4.5.4 Noxious Weeds and Other Invasive Plant Species of the Draft Environmental Impact Study for the Constitution Pipeline and Constitution’s Invasive Species Management Plans for New York State. In my professional judgment, these documents neither describe nor propose any methodologies or procedures that would effectively prevent and control the spread of aggressive invasive species into the wetlands along the proposed pipeline route or maintain their infestations to below an acceptable level that would not unavoidably and irreversibly negatively affect the ecology and native plant species in these wetlands.”

**The DEIS should be revised so that it (1) acknowledges that there are no proven methods for effectively controlling the introduction and spread of invasive introduced species along pipelines right-of-ways; and (2) makes the time period of control of invasive plants correspond to the time period of the operation of the pipeline rather than just three years; (3) describe how Constitution intends to compensate landowners for the financial costs they will incur when the pipeline permits the spread of introduced plants and animals on to their properties, including areas of the properties outside the right-of-way itself.**

CO50-40

### 41. Comment p. 2-15

The DEIS refers to “other approved purposes” for the disposal within the right-of-way of excess rock. On the Kernan Trust Land property the blasting of rock to a depth of at least 54 inches (4.5 feet) would produce a great deal of excess rock. If Constitution plans to dispose of this rock “within the right-of-way for “approved uses” it should be required to indicate how and where it plans to dispose of this rock. The easement agreement that Constitution sent the Kernan Land Trust did not specify anything about the disposal of excess rock within the right-of-way. **The DEIS should specify what these “other approved purposes” are, who or what agency will approve them and how the disposal of excess rock is provided for in the easement agreement that Constitution has sending to landowners.**

CO50-40

As stated in section 2.3.1 of the EIS, in areas with consolidated rock, the minimum amount of cover would be 24 inches. The entire sentence within section 2.3.1 of the EIS states, “in agricultural areas rock would not be used for backfill closer than 24 inches in mesic soil or 30 inches in frigid soils from the construction surface of the right-of-way, and any excess would be disposed of at a landfill or recycling facility or used for other approved purposes within the right-of-way (such as landscaping or site access control) as allowed by the landowner and applicable permits.” The Kernan Land Trust parcel is not classified as agricultural land.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-750

### CO50-41 42. Comment p 2-15

The DEIS says that Constitution proposes to “mitigate any damages caused by construction”. It would be impossible for Constitution to achieve such mitigation on the property of the Kernan Land Trust. Blasting through almost one mile of bedrock on this property will cause unavoidable, irreversible and severe negative environmental impact to the ecology of the underlying and adjacent wetlands and will cause a permanent loss of value of the property. No method exists by which Constitution will be able to “mitigate” such impacts. For the DEIS to suggest, with no evidence at all to back up the statement, that such mitigation measures exist and will be implemented is a serious misrepresentation. **FERC should re-write the DEIS to require Constitution to re-site the pipeline so that it does not go through or affect the wetland complex on the Kernan Land Trust.**

### CO50-42 43. Comment p. 2-17

Shallow bedrock underlies the entire proposed route of the pipeline through Kernan Trust lands. There would be very little suitable material to backfill the trench and the “...acquisition of backfill from other sources...” would be almost certainly necessary. The deposit of backfill from other sources in a trench through the Clapper Lake – Mud Pond wetland complex would inevitably and irreversibly affect the water in the wetland complex by altering its pH and water chemistry. The DEIS in no place notes or discusses this effect of the proposed pipeline on pristine wetlands along the route, much less offer any measures that would avoid, mitigate or compensate for these negative impacts, although it is highly doubtful that there are any effective ways to avoid or mitigate them. **The DEIS should be re-written to discuss the negative effects of depositing backfill brought from other places on the local soil, ground water and adjacent pristine wetlands, including creeks, springs, ponds, bogs, swamps and lakes.**

### CO50-43 44. Comment p. 2-22

The DEIS says, “The HDD construction method would be used at five locations, and the Direct Pipe construction method would be used at two locations”. The NYSDEC wrote in its scoping letter that Constitution should use trenchless directional drilling under water crossings wherever possible, presumably because it believes that trenchless crossing would cause significantly less negative environmental impact than trench crossings. Yet the DEIS does not explain why FERC finds acceptable that Constitution nevertheless plans to use HDD or Direct Pipe construction methods on only 2.5% of wetland and water body crossings. Nor does it state or explain the criteria Constitution used to select these water crossing for HDD and Direct Pipe trenchless crossing over the other 270 crossings and why FERC found these criteria to be acceptable and in the best public interest. **FERC should revise the DEIS to state the criteria it used to approve Constitution’s location and number of HDD and Direct Pipe trenchless crossings and why FERC finds these criteria and this number to be in the best interest of the public.**

### CO50-44 45. Comment p. 2-25

The DEIS says, “Constitution would use appropriate measures to ensure that road construction activities do not prevent passage by emergency and other vehicles...” such as “...temporary travel lanes during construction...” Yet it states that I-88 Alternative would cause too much disruption of traffic as a reason for it being a less preferable alternative than the alternative Constitution prefers. Disruption of traffic is a short-term, insignificant negative impact compared to the permanent, irreversible negative impacts that construction and operating the pipeline along the proposed **greenfield** route. If Constitution can use “appropriate measures” along the proposed route to manage traffic then it can use the same “appropriate measures”,

### CO50-41

The phrase “mitigate any damages caused by construction” was used in the context of water wells that could be damaged by construction. Constitution has committed to such mitigation (section 4.3.2.1 of the EIS). Section 3.4.3 of the EIS has been revised with new information regarding the Kernan Land Trust property and our assessment of potential impact avoidance, minimization, and mitigation measures.

### CO50-42

See the response to comment CO5-10 regarding the Clapper Lake and Mud Pond wetland complexes. The EI would be responsible for approving imported soils (if needed) and verifying that the soil is certified free of noxious weeds and soil pests, unless otherwise specified by the landowner, as stated in section 2.5.2 of the EIS. Our Plan states “Fertilize and add soil pH modifiers in accordance with written recommendations obtained from the local soil conservation authority, land management agencies, or landowner.” The landowner would have the opportunity to coordinate with the company regarding potential alterations to soil pH.

### CO50-43

Section 4.1.1.2 of the EIS includes a discussion of the geotechnical feasibility studies for the proposed trenchless crossings. Section 4.3.3.4 of the EIS includes a discussion of the feasibility of using a trenchless crossing method for sensitive or high quality waterbodies.

### CO50-44

Construction across a local or county road would be different from crossing or constructing within an interstate highway. As stated in section 3.4.1.2 of the EIS, disruption of traffic flow during blasting is one of the issues identified with alternative M. Road crossings (not interstate highways) at discrete, localized areas can typically be staged to allow for continuing traffic flow during construction, timed for off-peak periods, or otherwise managed to prevent or limit impacts on motorists.



# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-751

- CO50-44  
cont'd perhaps with some modifications, when it would need to place the pipeline in the I-88 corridor. **The DEIS must be consistent in its discussion of traffic disruption, and recognize that this is a temporary, completely reversible negative impact in no way comparable to the long-term, negative impacts that would occur along the proposed greenfield route.**
- CO50-45 **46. Comment p. 2-25.**  
The comment of FERC that "...we have reviewed the Winter Construction Plan and have found its mitigating measure acceptable..." inadequately explains the content of the Winter Construction Plan, the reasons why FERC finds it "acceptable" and why FERC finds it in the public interest to permit Constitution to construct the pipeline in winter months when FERC itself evidently believes that conditions are less suitable for such construction. **The DEIS should explain why FERC believes it is in the public interest to permit Constitution to rush the construction of the pipeline through winter construction, in spite of the extra risks to the environment that the DEIS itself indicates such winter construction would cause.**
- CO50-46 **47. Comment p. 2-27**  
The DEIS says the proposed pipeline route would traverse "Rugged topography, such as steep, vertical slopes and steep side slopes..." Yet the DEIS never adequately explains why FERC chose to consider this route preferable to alternative routes with less bedrock, in particular the M Alternative along the I88 corridor through level valley bottoms filled mostly with glacial till. **The DEIS should clearly explain FERC's reasoning for accepting Constitution's greenfield route that traverses ridge tops, shallow bedrock and forests over alternative non-greenfield routes.**
- CO50-47 **48. Comment 2-28**  
The DEIS provides no discussion of why FERC appears obligated to accept the "...in-service dates of March 2015" even though the DEIS itself notes repeatedly the lack of adequate information for evaluating the environmental impacts of the project. The DEIS itself provides sufficient evidence to make clear that adhering to this schedule will result in inadequate public comment on the DEIS, insufficient planning and unfavorable construction seasons. **The DEIS should explain why FERC thinks it to be in the public interest and the interest of landowners to permit Constitution to hurry the construction schedule to adhere to a in-service date of March 2015.**
- CO50-48 **49. Comment p. 2-30**  
The DEIS does not mention or discuss compliance measures, although FERC does have a policy on enforcement. Unless there are penalties attached to non-compliance with environmental protection measures, Constitution will have no incentive to abide by such measures or to protect the environment along the pipeline route. The DEIS does not inform the affected public as to how FERC intends to enforce the conditions under which it issues Constitution a certificate for the construction and operation of the proposed pipeline. **The DEIS should explain how FERC intends to enforce its conditions to protect the environment and what penalties Constitution will suffer if it does not abide by the mitigation measures or if it causes unacceptable or unforeseen negative environmental impacts.**
- CO50-49 **50. Comment p. 2-31**  
According to Dr. Bernd Blossey, of the New York State Invasive Species Institute, in his letters to FERC of November 2013 and March 2014, infestation with aggressive exotic species will inevitably occur along the pipeline route long after three years following construction outside of

- CO50-45 The EIS does not indicate that there are extra risks associated with winter construction. Section 2.3.2.6 of the EIS states that a Winter Construction Plan was developed to address specialized methods and procedures that would be used to protect resources during the winter season, and address the removal of snow and ice when it becomes necessary. Construction of pipelines during the winter is quite common and affords certain advantages such as avoiding bird nesting and fish spawning seasons.
- CO50-46 Section 3.0 of the EIS provides a comprehensive analysis of the proposed route as compared to other alternative routes, including alternative M.
- CO50-47 Constitution determined its target in-service date based on agreements with their shippers. A pipeline company can shorten the duration of construction by increasing the number of construction spreads (see section 2.3.1). In other words, one crew would not be rushed through construction on the entire project, rather multiple, additional crews could work simultaneously thereby completing construction activities at distinct segments along the route. Based on the project's current status and schedule, it does not appear that an in-service date of March 2015 is feasible.
- CO50-48 See the response to comment CO42-33.
- CO50-49 See the response to comment FA6-10 regarding long-term monitoring of the pipeline right-of-way for invasive species.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

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CO50-49  
cont'd | the right-of-way itself. Yet here the DEIS says that Constitution would monitor the spread of exotic species only within the right-of-way and for only three years following construction. **The DEIS should be revised to include a realistic analysis, based on scientific research and prior experience, of how the construction of the pipeline in the uplands greenfield route will stimulate the introduction and spread of exotic plant species within and outside of the right-of-way especially into wetlands and what measures would be required for effective control of the spread of aggressive introduced plant species.**

CO50-50 | **51. Comment p. 2-31**  
The statement that “Constitution would develop and implement...a plan to actively re-vegetate the wetland with native wetland herbaceous and wood plant species...” indicates a woeful lack of familiarity with actual conditions in a wetland such as the Clapper Lake – Mud Pond complex. This wetland has nearly 200 plant species, including many species of native orchid and carnivorous plants, and lacks any exotic species. No “...professional wetland ecologist...” will have the ability to develop and implement a plan to re-vegetate a wetland of this quality once it has been negatively affected by the construction of a pipeline through it. **The DEIS should be re-written to recognize that the construction of a pipeline through the Clapper Lake – Mud Pond wetland complex, and similar wetlands along the proposed route, would cause irreversible, severe negative impacts and insist that Constitution avoid putting its pipeline through such wetlands.**

CO50-51 | **3.0 Alternatives**  
**52. Comment p 3-1**  
The DEIS says,  
  
“...to present the most consistent comparisons of potential impacts on environmental resources this section presents data obtained from desktop sources for both the proposed route and alternative routes, even when field data may exist...”  
  
This statement indicates that FERC chose to ignore field data because Constitution did not collect comparable field data on alternative routes. This procedure is not scientifically defensible. In the case of the Kernan Land Trust, this procedure has resulted in a gross under-estimate of the area of wetland that the proposed pipeline would cross, even though we provided such data to Constitution and FERC. In the case of the Alternative M, this procedure has resulted in a significant under-estimate of the area and number of wetlands that would be crossed in the proposed route compared to the area and number of wetlands that would be crossed by Alternative M, the I-88 corridor route. It has also resulted in the DEIS ignoring the qualitative difference between undisturbed, upland wetlands and highly disturbed wetlands along the I-88 Alternative. FERC thus chose an unsound methodology for making its comparisons of environmental consequences, but one that allowed Constitution to provide only data that would favor its preferred route. **FERC should obtain, or require Constitution to obtain, complete and reliable field survey data that would permit a valid comparison of the environmental consequences of the proposed route with Alternative M.**

CO50-52 | **53. Comment p 3-1**  
The statement “the majority of route changes were made to avoid conflicts with existing or planned land use...” does not mention changes that were not made in the route to avoid wetlands

CO50-50 | See the response to comment CO5-10. Section 3.4.3 of the EIS has been revised with new information regarding the Kernan Land Trust property and our assessment of potential impact avoidance, minimization, and mitigation measures.

CO50-51 | See the response to comment CO43-23.

CO50-52 | Wetland impacts from the proposed route are discussed in section 4.4 of the EIS and impacts on interior forest lands are discussed in section 4.5.3 of the EIS.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

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CO50-52 cont'd	or interior forests. As a result, the proposed route would traverse many acres of unacknowledged wetland and interior forest. <b>The DEIS should state why Constitution and FERC did not choose, based on stakeholder concerns as well as exiting maps, a route that avoided as wetlands and interior forests.</b>
CO50-53	<p><b>54. Comment p. 3-2,3</b></p> <p>The DEIS says the No Action Alternative would cause</p> <p>“...existing and potential users of natural gas to either pursue other means of natural gas supply, to rely on other fuels...or to seek other measures to meet or curtail their energy needs...”.</p> <p>This statement indicates that the pipeline is not essential, since the demand for natural gas would be met by other means. <b>FERC should refuse a certificate to Constitution for this pipeline since the DEIS itself says that required energy will be supplied from other sources.</b></p>
CO50-54	<p><b>55. Comment p. 3-2, 3</b></p> <p>No data supports the statement,</p> <p>“...lack of a new pipeline with access to supply sources into the region could prolong the existing supply constraints in the proposed delivery areas, which could create winter-premium pricing and exacerbate price volatility for all natural gas users in the areas, etc.”.</p> <p>Nor does this section discuss quantitatively the likelihood of “increased energy conservation”. This section makes speculative assertions unsupported by quantitative data but only using terms such as “could” and “would likely” to support its assertions. <b>FERC should revise the DEIS so that it either provides quantitative data to support its statements about the supply of energy and increased conservation.</b></p>
CO50-55	<p><b>56. Comment p. 3-2, 3</b></p> <p>The DEIS says the “no-action alternative would not provide the potential economic benefits associated with the proposed projects...” but provides no data for these supposed benefits. Nor does it compare these “potential economic benefits” to any potential economic costs. Costs, however, will occur. For example, if the pipeline were to be built and operated through the land of the Kernan Land Trust, it will cause (1) loss of property value; (2) loss of timber production; (3) destruction of part of the main access roads and skidding trails to timber stands; (4) loss of the only suitable place to collect and process logs (log landing). Economic costs as well as benefits should be included in an economic analysis. This part of the DEIS, therefore, is essentially useless to the public as a discussion of the pros and cons of the No Action Alternative. <b>This section of the DEIS should be re-written based on unbiased, reliable, quantitative data and should include economic costs as well as benefits and then re-submitted to the affected public for their comments.</b></p>
CO50-56	<p><b>57. Comment p. 3-28</b></p> <p>The DEIS says that the NYCDEP has commented about,</p> <p>“...the sensitivity of the water supply watershed, its importance to millions of water consumers in New York, and potential impacts on the watershed and ultimately the water</p>

CO50-53	As stated in section 3.1 of the EIS, the demand for natural gas in the northeastern United States is well documented, as is the lack of adequate pipeline capacity to deliver required volumes of natural gas. It would be reasonable to assume that “other means of natural gas supply” could mean a different pipeline project. If the no-action alternative was chosen, then a subsequent project could be proposed in the same, similar, or different location as the proposed projects. Also see the response to comment CO42-41.
CO50-54	References for existing natural gas supply constraints are discussed in section 3.1 of the EIS. Energy efficiency programs in New York and New England are discussed in section 3.1.1 of the EIS.
CO50-55	The full sentence in section 3.1 of the EIS refers the reader to section 4.9 for a full discussion of the potential economic benefits associated with the proposed projects, including increased jobs, secondary spending, and tax revenues during construction, as well as increased property tax revenues to local governments during operations. See the response to comment LA5-3 regarding property values. As stated in section 4.9.4.1 of the EIS, Constitution would repair any roads damaged by the pipeline project.
CO50-56	As stated in section 3.4.1.1 of the EIS, the NYCDEP supported Constitution’s decision to deem alternative K as non-viable and requested that Constitution’s project not be sited within the New York City Water Supply Watershed. Section 3.4.1.1 provides additional reasons why alternative K was not considered to offer a significant environmental advantage over the proposed route such as more impacts on Important Bird Areas, waterbodies, and streams designated as drinking water supplies.



# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

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CO50-56 cont'd	<p>supply resulting from storm water discharges and polluted runoff that could occur during the construction of the pipeline...”</p> <p>The DEIS says,</p> <p>“...it is likely that major additional permitting efforts and impact avoidance, minimization and mitigation would be required by the NYCDEP if Alternative K was adopted...”</p> <p>FERC should apply the same criteria to areas outside of the NYC watershed. The same impacts would occur along the proposed route and the same strict permitting and impact avoidance, minimization and mitigation measures should be required. People living outside of NYC and outside the NYC watershed are not less important than those inside them. FERC provides no justification for treating the environment and people inside and outside the NYC watershed and NYC by two different standards. <b>The DEIS should be re-written to give the same weight to the negative environmental effects of the pipeline construction on environments and people outside as within the NYC watershed and New York City.</b></p>
CO50-57	<p><b>58. Comment p. 3-28</b></p> <p>FERC’s analysis here is blatantly biased towards dismissing Alternative K and accepting Constitution’s proposed route. It makes no reference to quantitative data but uses such terms as “shorter”, “affecting less land”, “less greenfield construction”. The DEIS should base its analysis on data, not on subjective terms. <b>FERC should re-write this section to include quantitative data and to explain FERC’s reasoning for favoring the proposed greenfield route rather than the non-greenfield Alternative K route.</b></p>
CO50-58	<p><b>59. Comment p. 3-28</b></p> <p>The DEIS here gives great weight to the “Audubon Society-designated Important Bird Areas and Forest Blocks of Importance” on the Alternative K route. The proposed <u>greenfield</u> route, however, goes through large blocks of other interior forest. These blocks may be equally important for the successful reproduction of bird and other animal species whose populations are declining. <b>FERC should re-write the DEIS so that it gives equal importance to interior forests when it compares the environmental consequences of alternative routes.</b></p>
CO50-59	<p><b>60. Comment p. 3-28</b></p> <p>FERC policy states that new pipelines should follow existing ROWs, yet here FERC argues that following existing ROWs along transmission lines would cause more negative environmental impacts. <b>FERC should re-write this section to make it consistent rather than contrary to stated FERC policy to require co-location of new pipelines along existing right-of-ways.</b></p>
CO50-60	<p><b>61. Comment p. 3-28</b></p> <p>The DEIS says,</p> <p>“...according to Constitution, the full assessment and possible adoption of Alternative K would add extensive time for study, stakeholder input, agency review and permitting and construction, potentially adding over 2 years to the project schedule...” and “possibly render the project non-viable from a market perspective...”</p>

CO50-57

The quantitative data used to compare the proposed route and the alternative K route can be found in table 3.4.1-1 of the EIS. The data provided in this table were used to develop the comparison text in the section.

CO50-58

As depicted in table 3.4.1-1 of the EIS, in addition to longer crossings of Important Bird Areas and Forest Blocks of Importance, alternative K would cross more forested land and more forest edge habitat. As stated in section 3.4.1.1 of the EIS, according to Audubon New York, Important Bird Areas are typically discrete habitats that provide essential habitat for bird species including sites for breeding, migrating, and overwintering. These areas also typically focus on habitats for birds that are under regulatory protection, those birds that are considered at risk or especially vulnerable to habitat loss, or at places where large numbers of birds may congregate. Forest Blocks of Importance are contiguous blocks of forested areas providing habitat for many wildlife species, including birds. In addition to the total miles of blocks crossed, the blocks crossed by alternative K are larger, more contiguous blocks than those crossed by the proposed route.

CO50-59

See the response to comment CO2-1. We support the collocation of pipelines with existing utilities where practical and recognize the value of collocation in regard to environmental resources. However it is not always practical, feasible, or environmentally preferable to collocate with an existing utility. As stated in section 3.4.1.1 of the EIS, collocation of alternative K with the existing utility lines could result in a corridor ranging between 200 and 325 feet whereas the proposed project would have a typical construction right-of-way of 125 feet wide or less.

CO50-60

Constitution’s statements regarding alternative K adding 2 years to the schedule and rendering the project non-viable are just one factor that was considered, but it was not a main or deciding factor. If an alternative route was otherwise determined to have clear environmental advantages over the proposed route, then project timing and schedule would not be of primary importance. See the response to comment CO43-23 regarding use of desktop data for the alternatives analysis.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

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CO50-60  
cont'd

Constitution's problems with timing should not be FERC's concern in an EIS. If Constitution had done its planning in a timely way and had provided sufficient resources for adequate study of all the potential alternative routes, then it would not be in the position of having to add "extensive time, stakeholder input, agency review etc" to its planned time line for its pipeline project. If FERC is going to accept Constitution's argument, then it should explain why it is the responsibility of the public, which FERC, as a public agency represents, to bear the consequences of Constitution's inadequate planning and resource allocation process. **FERC should revise this section of the DEIS to remove consideration of Constitution's concerns about timing and to note that Constitution must provide adequate, reliable and comparable data on all of the proposed alternative routes, especially the non-greenfield routes rather than provide more data on its own preferred greenfield route than on reasonable alternative non-greenfield routes.**

CO50-61

**62. Comment p. 3-30-44**  
**The DEIS provides no qualitative data in its comparison of the proposed route with Alternative M.** It does not mention that the environment along I-88 has been extensively modified and disturbed, especially through the introduction of exotic plant species into its wetlands. Nor does it describe or analyze an alternative route that would utilize more of the existing I-88 corridor than Alternative M does. Such an alternative would be already largely cleared of natural vegetation and its wetlands would be already been largely modified. The DEIS also fails to compare the amount of agricultural land a reasonable alternative route that utilized the I-88 corridor would affect compared to the proposed and the M alternatives. The DEIS does not explain why qualitative data has not been collected for these three reasonable alternative routes or why the reasonable alternative of collocation with the I-88 corridor is not considered in the DEIS. **FERC should re-write the comparison of the environmental effects of the proposed route, the Alternative M and another reasonable route which uses the existing I-88 corridor, on the basis of qualitative as well as quantitative data.**

CO50-62

**63. Comment p. 3-60**  
The DEIS says,

"Based on the unresolved status of several landowner comments regarding the proposed crossings of eleven individual tracts, we recommend that:

- Constitution should further assess minor route deviations for the tracts identified in table 3.4.3-1 of the DIS in coordination with the landowners and either incorporate a route that avoid the resources of concern or otherwise explain how potential impacts on resources have been effectively avoided, minimized or mitigated. Constitution should file the assessments with the Secretary **prior to the end of the draft EIS comment period**".

The Kernan Land Trust is one of the ten tracts mentioned here. As of April 6, 2014, one day before the end of the draft EIS comment period, Constitution had not, so far as could be determined, filed any such further assessment with the Secretary. Nor had it contacted the Kernan Land Trust in order to coordinate a new route or indicate how it intends to avoid, minimize or mitigate the irreversible, inevitable severe negative impacts on its land, especially to the Clapper Lake – Mud Pond wetland complex. Dr. Bernd Blossey, in his letter to FERC of March 23, 2014, clearly indicates that it is impossible for Constitution to avoid, minimize or mitigate the spread of aggressive introduced species into the Clapper Lake – Mud Pond wetland

CO50-61

See the response to comment CO43-23 regarding use of desktop data for the alternatives analysis. Section 3.4.1.2 of the EIS provides an analysis of placing the pipeline within the median of I-88 and placing the pipeline adjacent to I-88 within or along the controlled access areas managed by the NYSDOT.

CO50-62

Constitution filed a response to Recommendation No. 12 on April 8, 2014 ([http://elibrary.ferc.gov/0/idmws/file\\_list.asp?document\\_id=14202518](http://elibrary.ferc.gov/0/idmws/file_list.asp?document_id=14202518)). On May 14, 2014 we requested that Constitution evaluate additional crossing methods for the Kernan Land Trust parcel and also a suite of alternative routes based on input from the Kernan land Trust and its agents. Constitution replied on June 3, 2014 and its response can be viewed at [http://elibrary.ferc.gov/0/idmws/file\\_list.asp?document\\_id=14222572](http://elibrary.ferc.gov/0/idmws/file_list.asp?document_id=14222572). Section 3.4.3 of the EIS has been revised with new information regarding the Kernan Land Trust property and our assessment of potential impact avoidance, minimization, and mitigation measures.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont’d)

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cont'd if it uses its proposed route across Kernan Trust land. **Since Constitution has failed to respond to FERC's recommendations with respect to the Kernan Land Trust lands it should re-write the DEIS to require Constitution to find an alternative route off the Kernan Trust Lands.**

### CO50-63 Environmental Analysis 4.0

#### 64. Comment p. 4-1

The assumption that “the proposed facilities would be constructed as described in section 2.0 of the EIS” became incorrect and Section 2, Proposed Actions, of the DEIS became outdated when, on March 26, 2014, Constitution added eleven 100 foot tall transmission towers to its project through a supplementary report to FERC. The construction of these transmission towers could cause significant, direct and indirect, cumulative and long-term negative environmental impacts during both their construction and operational phases. The DEIS, however, provides no description or evaluation of the environmental consequences of this important new proposed action. **FERC should re-write the DEIS so that it includes and analyzes this new proposed action and then re-submit the DEIS so that affected people can comment on a complete rather than incomplete DEIS.**

#### CO50-64 65. Comment p. 4-2

The section first describes the underlying bedrock as “Mesoproterozoic metamorphic rock, the majority of which is overlain by till, recent alluvium, kame deposits, or is exposed bedrock” and five sentences later describes it as “alternating strata of sandstone and shale”. Constitution proposes using the power of eminent domain to blast a trench a mile long and four and a half feet deep through our land. **FERC should revise this section of the DEIS to make it give an accurate and consistent description of the bedrock underlying the proposed pipeline route.**

#### CO50-65 66. Comment p. 4-2

The descriptions of the topography of Delaware and Otsego Counties provided are pointless since they refer to the entire counties rather than to the specific topography of the proposed route. Moreover, they do not state the key topographic fact of the proposed route: the proposed route traverses steep slopes and ridge tops where bedrock is shallow, creeks and streams originate and where there are many bogs, swamps and ponds. **FERC should re-write the DEIS to describe accurately the topography of the proposed and alternative pipeline routes and thus provide an adequate basis for evaluating the environmental consequences of the proposed alternative as compared to other reasonable alternatives with different topographies.**

#### CO50-66 67. Comment p. 4-4

The DEIS indicates that Constitution has not provided the results of the geotechnical studies for all the proposed crossings. The DEIS is not sufficiently complete to provide an adequate basis for comparing the environmental consequences of alternative reasonable routes for the pipeline. Nor is it sufficiently complete in its provision of technical studies for the public to provide informed comments. **To permit adequate public comment and adequate evaluation of the comparative environmental consequences of reasonable alternative routes, FERC should re-submit the DEIS for comments of affected people and reassess the comparative environmental consequences of alternative routes once the geotechnical studies it says are lacking have completed.**

CO50-63 See the response to comment SA2-1 regarding the communication towers.

CO50-64 Section 4.1.1 of the EIS has been revised to clarify that the text was discussing two separate topics: overall geologic setting and surficial geology.

CO50-65 All of the alternative routes discussed in section 3.0 of the EIS included evaluation of steep slopes, shallow bedrock, and number of waterbody crossings. In addition, section 4.1.3.4 of the EIS provides information regarding specific measures that would be followed for areas of steep slopes. Describing in detail the localized topography along 124 miles of proposed route is beyond the scope of this EIS. However, site-specific topographic issues are discussed within the EIS (such as in section 4.1.3 of the EIS) and listed (appendix G) where applicable.

CO50-66 See the response to comment CO41-11.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

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CO50-67 **68. Comment p. 4-15**

The DEIS says, "...the proposed pipeline cross 45.5 miles of shallow depth to bedrock that may require blasting." That is almost 37% of the proposed route. By contrast, Alternative M, as described in the DEIS, would largely traverse glacial till deposits in the valley bottoms and would cross only 29.7 miles of bedrock, or only 15% of this alternative route. Another reasonable alternative, not considered in the DEIS, that more closely followed the I-88 corridor would probably cross even less bedrock. **In the DEIS, FERC should explain its rationale for favoring a route that requires so much blasting through bedrock over alternative routes that would not require so much blasting through bedrock.**

CO50-68 **69. Comment p. 4-5**

On page 1-3 the DEIS states that Constitution has field surveyed approximately 534 of 707 land tracts or about 76 percent of the total number of tracts. On page 1-4 the DEIS states that "...a substantial number of the outstanding surveys for Constitution's project... would have to be completed after issuance of the Certificate". Twenty-four percent of the required field survey data are not yet available. It is then premature to draw the conclusion that "the construction and operation of the proposed pipeline project would not adversely impact any state-listed species". To extrapolate from surveyed to un-surveyed tracks is not an acceptable methodology for determining the presence or not of state-listed species. Some of these species, which are rare species, are likely to occur in only certain, restricted sites. It is probably that many of these sites were not surveyed. **FERC should revise its conclusion to say that it is not yet possible to make a conclusion as to whether the proposed pipeline project would or would not adversely impact any state-listed species.**

CO50-69 **70. Comment p. 4-15**

The DEIS indicates that Constitution does not yet know exactly how it intends to make its trench through the types of bed rock it says it will encounter. Constitution appears to be planning to experiment to see what works. Landowners, therefore, will not know what will happen on their land once it is confiscated. **The DEIS should be re-written to clearly describe the methods Constitution intends to use for different types of bedrock so that landowners know what to expect if the pipeline crosses their land and can come to fair easement agreements with Constitution regarding the construction and operation of the pipeline.**

CO50-70 **71. Comment p. 4-94, 98**

The DEIS says,

"Constitution's field reconnaissance surveys and wetland delineations were conducted from June 2012 to September 2013...Constitution has not yet acquired survey access for about 24 percent of the pipeline route (and estimated 30 miles), has finalized special status species surveys focused on a subset of the route accounting for approximately 8 miles, and has not surveyed three of the proposed contractor yards sites."

Later the DEIS says,

"Constitution is still conducting surveys and consulting with the FWS regarding federally listed threatened and endangered species that may be present in the project area and "In addition, Constitution has added additional access roads and contract yards that have not been reviewed by the agencies."

CO50-67

Section 4.1.3.8 of the EIS states that the *entire* proposed route would cross 45.5 miles of shallow depth to bedrock that may require blasting. As depicted in table 3.4.1-4, alternative M Segment 5/6 would cross 29.7 miles of shallow bedrock. However, the corresponding segment of the proposed route would cross 0.2 mile less shallow depth to bedrock than alternative M Segment 5/6. The alternative M routes discussed in section 3.0 do not provide an analysis of the entire proposed route. They are an analysis of the segment of the proposed route which corresponds to the area of the proposed alternative. In addition, as stated in section 4.1.3.8 it is expected that a large portion of the bedrock would be ripped using conventional excavation techniques and that blasting would not be required.

CO50-68

See the response to comment CO5-4. In section 4.7.3 of the EIS, we recommend that prior to construction, Constitution should file with the Secretary the results of any outstanding surveys for New York and Pennsylvania federal and state-listed species and identify additional mitigation measures developed in consultation with the applicable federal and state agencies. The regulating federal and state agencies would be most suited to assist Constitution with development of protective mitigation measures for these species. This recommendation was the basis for our *not likely to adversely affect* determinations. In addition, see the response to comment FA4-3 regarding survey permission.

CO50-69

As described in section 2.3.1 of the EIS, bedrock would be broken up and removed where practical by ripping or hammering the rock with a pointed backhoe attachment before excavating it with a backhoe. If rock cannot be removed by ripping or hammering, then blasting may be required. The EIS lists the areas where shallow depths to bedrock occurs.

CO50-70

See the response to comment CO50-68.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

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CO50-70 cont'd	<p>These statements in the DEIS clearly indicate that Constitution's field reconnaissance surveys and wetland delineations are seriously incomplete. May is a particularly important month for recording plant and bird species, yet the surveys took place starting only in June. Constitution has not surveyed 24 percent of the proposed route. It has finalized special status species surveys for only 6 % of the route. It has not compared the occurrence or status of special status species along the proposed route with other reasonable alternative routes. It has not surveyed three yard sites. It is still consulting with the FWS. If these data are important then FERC cannot draw valid conclusions without them about how the proposed pipeline would or would not adversely impact any state-listed species. Nor can it compare the consequences for threatened plants and animals of the proposed route with the consequences along reasonable alternative routes. <b>FERC should: (1) revise this section of the DEIS to state that sufficient data are not yet available to draw reliable conclusions about the adverse impact of the pipeline on state-listed species; and (2) formulate its conclusions only when sufficient data about the species along the proposed and reasonable alternative routes have been collected according to acceptable scientific methodologies at the correct time of the year and along the entire proposed and alternative routes.</b></p>
CO50-71	<p><b>72. Comment p. 4-13</b></p> <p>If Constitution files the results of the formal slope stability study for the area at MP 30.3 only by the end of the draft EIS comment period, the public will be excluded from commenting on the study. <b>FERC should extend the comment period to allow public comment on a completed DEIS.</b></p>
CO50-72	<p><b>73. Comment p. 4-14</b></p> <p>The statement that "...the potential for flash flooding to occur is low..." is proven incorrect by the statement in the paragraph about the effects of Tropical Storm Lee. It is also contradicted by my personal experience over the last 50 years, during which I have seen many flash floods on the Charlotte River and its tributaries. <b>The DEIS should analyze the data that would indicate how often and of what magnitude flash floods could occur and what effect they could have on the pipeline and should take into account the experience of long-time residents along the proposed pipeline route.</b></p>
CO50-73	<p><b>74. Comment p. 4-12</b></p> <p>The DEIS says,</p> <p>"Constitution has not indicated if it would adhere to these mitigation measures; therefore to adequately assess the impacts on these karst and steeply sloped areas, we recommend that Constitution should adopt the recommendations and mitigation measure for steep slope and karst areas provided in the Geological Reconnaissance Memorandum dated October 4, 2013."</p> <p>If FERC does not have enough information to "adequately assess the impacts" of the pipeline on steep slopes and karst topography, certainly the affected public does not either. <b>FERC should require Constitution to revise its proposed actions to include the recommendations and mitigation measures provided in the Geological Reconnaissance Memorandum dated October 4, 2013, revise the DEIS accordingly and re-submit the DEIS for comment by the affected public once it is complete.</b></p>

CO50-71	See the response to comment SA1-2. Constitution filed an update on June 3, 2014 for a reroute extending from MP 30.16 to MP 30.53 designed to avoid the landslide area.
CO50-72	See the response to comment CO1-5.
CO50-73	See the response to comment LA10-1.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

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### CO50-74 | 75. Comment p. 4-14

Based on 50 years of experience with flooding of the Charlotte River and its tributaries, I refute the statement that “The potential for flash flooding to occur and significantly impact construction or operation of the proposed pipeline is low...” I know from personal experience how fast rivers and creeks along the proposed pipeline route can rise and how severe erosion can be on roads and skidding trails. The right-of-way will cross thin, erodible soils. When stripped of vegetation, these soils will no longer retain water. Run-off will be faster and will contribute to increased and more rapid flooding. That the proposed route goes along ridge-tops will compound the risk from flooding. The DEIS, moreover, contradicts its own evidence from the flooding caused by Hurricane Irene in 2011. **FERC should revise the DEIS to reflect accurately the likelihood that eliminating vegetation in a strip along the top of the ridges for 124 miles will increase the risk of flood damage.**

### CO50-75 | 76. Comment p. 4-16

The DEIS says, “Impacts on ...springs, wetlands...” could result from blasting. Blasting through the bedrock in the wetlands between Clapper Lake and Mud Pond would inevitably affect these wetlands as well as the two water bodies. The DEIS provides for no effective measures to avoid the irreversible, severe impact such blasting would cause on the Clapper Lake and Mud Pond wetlands or on other such wetlands and water bodies along the proposed route. The DEIS provides no valid basis for FERC to conclude that Constitution’s Blasting Plan is “acceptable”. **The DEIS should be revised to describe accurately how blasting through bedrock will affect wetlands and water bodies such as Clapper Lake and Mud Pond and should require Constitution to avoid them rather than blast through them.**

### CO50-76 | 77. Comment p. 4-19

The DEIS says that special measures are required for the three springs and three private drinking water wells between MP 115 and 124 to counter the negative effects of pipeline construction. Yet the DEIS does not even mention that Constitution proposes to route the pipeline through the Clapper Lake and Mud Pond wetlands. The mitigation provision of “an alternative water source” obviously is inapplicable to water bodies. Nor could Constitution possibly “compensate the affected owner or repair the damage” to such pristine water bodies. “Blast monitoring and post-blast surveys to assess any potential concerns” would do nothing to remedy, minimize, or avoid the damage to these wetlands (or the springs and private drinking water wells) from blasting, since the blasting will have already taken place. The DEIS thus simply ignores the negative effects on wetlands of Constitution’s blasting through adjacent or underlying bedrock. **The DEIS should be revised to include a science-based discussion of how blasting through bedrock beneath or adjacent to wetlands will affect the ecology of the wetlands and should recommend that such wetlands be avoided rather than crossed.**

### CO50-77 | 78. Comment p. 4-24

The proposed route will cross 630.1 acres of prime farmland or farmland of statewide importance. The DEIS does not provide comparable figures for Alternative Route M since the tables in Section 3 refer to miles of agricultural land crossed not acres affected and refers to farmland not to prime farmland. **The DEIS should be revised to include comparable data for the acres of prime farmland that Alternative M would affect.**

### CO50-74

See the response to comment CO1-5. See the response to comment CO41-16 regarding erosion control devices. During construction and restoration, Constitution would be required to install and maintain erosion and sediment control devices to minimize erosion and stormwater runoff. After restoration has been completed, the vegetation covering the operational right-of-way, as well as features such as permanent slope breakers, would minimize stormwater runoff and erosion. Increased flood damage from construction of the proposed projects is not anticipated.

### CO50-75

Although shallow bedrock is anticipated to occur in the area of the Kernan Land Trust property, it is unclear whether bedrock occurs within 5.5 to 7.5 feet of the ground surface. If it does occur within the proposed trenching zone, then Constitution would first attempt to remove the bedrock through mechanical means such as ripping or hammering the rock with a pointed backhoe attachment as described in section 2.3.1 of the EIS. Only if bedrock does occur within the trenching zone and if it is not rippable using mechanical means, would blasting be evaluated. Constitution’s Blasting Plan requires the blasting contractor to also prepare a site-specific blasting plan that includes site-specific details and blasting procedures which would be tailored to ambient conditions and resources as described in section 4.1.5 of the EIS.

### CO50-76

As stated in section 4.4.3 of the EIS, blasting may be necessary across an estimated 1.6 miles of wetlands. Constitution would maintain the original wetland hydrology by preparing site-specific blasting plans tailored to the local conditions, installing trench plugs, and restoring pre-construction contours.

### CO50-77

The commentator’s statement regarding prime farmlands and Alternative M is noted.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont’d)

S-760

- CO50-78 | **79. Comment p. 4-27**  
Table 4.2.2-3 indicates that in Delaware County the pipeline will affect only 5.5 miles of vulnerable soils. On the Kernan Land Trust property alone there are at least 0.5 miles of vulnerable soils. The figure of 5.5 miles thus is highly doubtful, especially considering that 25% of the pipeline route has not been surveyed on the ground and that the proposed route follows ridge tops with shallow bedrock for most of its distance. **The DEIS should provide accurate data for vulnerable soils.**
- CO50-79 | **80. Comment p. 4-34**  
FERC recommends that “Constitution should adhere to a maximum allowable construction equipment rutting depth of 4 inches...” It does not say how such adherence will be measured, monitored or enforced. **The DEIS should specify how this recommendation will be effectively measured, monitored and enforced.**
- CO50-80 | **81. Comment p. 4-41**  
The DEIS says, “Blasting could affect groundwater quality by temporarily changing groundwater levels and increasing groundwater turbidity near the construction right-of-way...” Blasting through the wetlands between Clapper Lake and Mud Pond on the Kernan Land Trust lands will certainly affect the water quality of these water bodies. They are highly unlikely to return to their current pristine state because outflows are very slow. The DEIS says nothing about these two wetlands (in spite of data provided to Constitution by the Kernan Land Trust). This statement clearly indicates that the only way to avoid these negative effects of blasting on Clapper Lake and Mud Pond is to move the alignment of the pipeline so that it does not cross or go near these water bodies. **The DEIS should recommend that the route of the pipeline be moved so that blasting through bedrock does not affect Clapper Lake and Mud Pond wetlands.**
- CO50-81 | **82. Comment p. 4-43**  
The DEIS’s conclusion here does not mention but simply ignores the inevitable and irreversible significant effects on wetlands that would be caused by blasting through bedrock under them or near them. **The DEIS should be revised so that it analyzes thoroughly the effects of blasting on wetlands such as that which occurs around Clapper Lake and Mud**
- CO50-81 | **83. Comment p. 4-54**  
This section describes many impacts that operations such as blasting, clearing, and backfilling could cause on water bodies. All these impacts would affect the Clapper Lake – Mud Pond wetland complex, since the proposed route runs through the wetland between them. The water of these water bodies changes very slowly if at all, so contamination will not be diluted, washed away or disappear within any time period that can be defined or that will be too short to be considered significant. The Kernan Land Trust has, with expert advice, identified two alternative routes that follow existing right-of-ways to the south of Mud Pond and has pointed out that the data in the Resource Reports provided by Constitution indicate that a route along the I-88 corridor would cause less negative environmental impact than the proposed route. **The DEIS should recommend that the pipeline route be moved to a route that does not affect the Clapper Lake or Mud Pond or their surrounding wetland.**

- CO50-78 | As stated in table 4.2.2-3 of the EIS, data regarding vulnerable soils were obtained from the NRCS rather than field surveys.
- CO50-79 | As stated in section 4.2.4 of the EIS, in agricultural areas where soils become saturated before topsoil segregation occurs, the Agricultural Inspector would either halt work or allow construction to proceed as long as rutting does not exceed pre-determined depths. Our recommending about rutting depth would be monitored by the Agricultural Inspector. The FERC’s third-party compliance monitors would also monitor adherence to this recommendation.
- CO50-80 | See the responses to comments CO5-10 (wetlands) and CO50-75 (blasting). Section 3.4.3 of the EIS has been revised with new information regarding the Kernan Land Trust property and our assessment of potential impact avoidance, minimization, and mitigation measures.
- CO50-81 | See the responses to comments CO5-10 (wetlands), CO50-62 (minor route variations), and SA4-2 (alternative M).



# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

### CO50-82 | 84. Comment p. 4-62, 63

The DEIS says, “The majority of the project’s wetland impacts would occur from construction within temporary workspaces (75.7 acres) and therefore return to preconstruction conditions following construction....” and “The majority of the impacts on wetlands from the proposed pipeline would be temporary and short-term...”. Scientific evidence and practical experience do not support these statements. The effect of aggressive introduced species on a pristine wetland cannot possibly be “temporary and short-term”. Dr. Bernd Blossey, of the New York State Invasive Species Institute at Cornell University and a world authority on invasive species with 30 years of experience, makes this clear in a letter to FERC dated March 23, 2014 of which the following is a quotation:

“I have reviewed Section 4.5.4 Noxious Weeds and Other Invasive Plant Species of the Draft Environmental Impact Study for the Constitution Pipeline and Constitution’s Invasive Species Management Plans for New York State. In my professional judgment, these documents neither describe nor propose any methodologies or procedures that would effectively prevent and control the spread of aggressive invasive species into the wetlands along the proposed pipeline route or maintain their infestations to below an acceptable level that would not unavoidably and irreversibly negatively affect the ecology and native plant species in these wetlands.”

**The DEIS should be revised so that it acknowledges the inevitable and irreversible effect of infestation of wetlands by exotic species on the Clapper Lake – Mud Pond wetland complex and on other wetlands along the proposed pipeline route and to acknowledge that wetlands along Alternative M are already infested with aggressive introduced species.**

### CO50-83 | 85. Comment p. 4-62-63

The DEIS says,

“... Constitution would finalize invasive plant surveys upon receipt of survey permission and would subsequently determine the locations of wash stations. Because surveys are not complete and the locations of weed wash stations have not yet been provided, we recommend that: **Prior to construction, Constitution should file with the Secretary the final, complete results of invasive plant surveys and the planned locations of weed wash stations for review and written approval of the Director of OEP.**”

If the surveys are not complete and the locations of weed wash station have not yet been provided then the DEIS is not complete enough for the public to be able to make knowledgeable comments. **FERC should extend the comment time so that the public can comment on a complete DEIS.**

### CO50-84 | 86. Comment Page 4-65, 66

The DEIS says,

“Re-vegetation and noxious weed control plans are included in Constitution’s state-specific ECPs. Constitution proposes to restore wetlands with seed and mulch...Following construction, Constitution would ensure that all disturbed areas successfully re-vegetated.

CO50-82

See the response to comment FA6-10 regarding long-term monitoring of the pipeline right-of-way for invasive species.

CO50-83

See the response to comment FA1-1.

CO50-84

See the responses to comments CO5-10 (wetlands).



# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont’d)

S-762

CO50-84  
cont'd

The plans are based on an assessment of wetland impacts using remote sensing techniques for portions of the pipeline corridor which could not be assessed due to the lack of landowner permission. Wetland impacts were also assessed using ground surveys where landowner permission was granted.”

The Kernan Land Trust has documented the presence of a network of wetlands on its property between Clapper Lake and Mud Pond, both NYSDEC regulated wetlands. These wetlands were apparently not detected by the “remote sensing techniques” referenced on page 4-66, since the DEIS has failed to acknowledge the presence of these wetlands in any maps, descriptions, tables, analyses, or calculations. Further, the Kernan Land Trust provided FERC and Constitution with a map showing a preliminary boundary of these wetlands in its comments on Constitution’s Resource Reports. Yet, even with both Constitution and FERC alerted to the presence of these wetlands, there is no acknowledgement of their existence anywhere in the DEIS, calling into question the effectiveness of the methods used, as well as the adequacy and trustworthiness of the entire wetlands analysis. Our property is but one of many properties not yet surveyed. Although we denied unconditional access, we did provide pertinent information, collected by experts, regarding the presence of wetlands so that it could be considered in the impact analysis. We cannot trust that other wetlands have not gone undetected by “remote sensing techniques”. We have arranged with both the NYSDEC and ACOE to delineate and confirm these wetland boundaries as soon as conditions allow in the coming weeks. **FERC should re-examine the purported extent of wetlands as reported by Constitution within the project area and revise its analyses.**

### 87. Comment p. 4-66

The DEIS says, “These plans are currently under review to ensure appropriate compensation for impacts on aquatic resources.” In fact, it would be impossible to compensate for the ecological damage the pipeline would cause on such water bodies as Clapper Lake and Mud Pond, which are unique, pristine wetlands that have not been infested by introduced species. **FERC should revise the DEIS to require Constitution to avoid such wetlands.**

CO50-85

### 88. Comment p. 4-67

The DEIS says,

“With adherence to the ECPs. Procedures, the NYSDEC and COE permit requirements, and our recommendations, impacts on wetlands would be minor. While adverse and long-term impacts on wetlands would occur, with Constitution’s implementation of its mitigation we conclude the impacts would be reduced to less than significant levels.”

The conclusion stated here is unsupported by the DEIS’s previous information and analyses. (1) The ECPs, as stated by Dr. Bernd Blossey, will not reduce the spread of invasive plant species into wetlands to less than significant levels. (2) The NYSDEC and the COE have not issued permit requirements so it is not possible yet to analyze whether they will be effective or not in reducing negative impacts to less than significant levels. (3) There is no indication in the DEIS that FERC will be able to enforce Constitution’s adherence to “its mitigation” or that Constitution will be penalized to an extent that will cause it to implement the “mitigation”. (4) The “mitigation” is scheduled to last only during construction and then three years subsequently, not for the entire period of the operation of the pipeline. (5) FERC does not define what it means by the term “less than significant levels” – “less than significant” over what time period, for what

CO50-85

See the response to comment FA6-10 regarding long-term monitoring of the pipeline right-of-way for invasive species. See the response to comment CO42-33 regarding mitigation and monitoring of adherence to required mitigation. As stated in the Party Letter and the Executive Summary of the EIS, the FERC staff has determined that approval of the projects would have some adverse environmental impacts, but these impacts would be reduced to less-than-significant levels with implementation of impact avoidance, minimization, and mitigation measures proposed by the Applicants and with additional measures that we are recommending. As stated in section 4.4.3 of the EIS, wetland monitoring would be carried out until wetland restoration is deemed satisfactory by the FERC.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-763

- CO50-85  
cont'd species and according to whom? Certainly the contamination and infestation of the Clapper Lake – Mud Pond wetland on the Kernan Trust Land will be extremely “significant” to the trustees, will affect many species of plants and animals and will last forever. FERC has no authority, data, capability or knowledge to be able to decide what is a “less than significant” impact on the Clapper Lake – Mud Pond wetland complex. **FERC should re-write this conclusion section so that it is based on scientific data and actual NYSDEC and COE permit requirements.**
- CO50-86 **89. Comment p. 4-70**  
The DEIS ignores information provided to Constitution and FERC about the Clapper Lake – Mud Pond wetland complex between MP 90.7 and MP 91.7. This complex encompasses rare pristine bogs and a black spruce swamp. **The DEIS should include and analyze all data provided to FERC and Constitution, especially regarding the wetlands on the property of the Kernan Land Trust.**
- CO50-87 **90. Comment p. 4-70**  
The DEIS says, “Constitution identified 35 acres as the minimum size of interior forest habitat that would support most interior forest bird species (Robbins et al., 1989). FERC thus accepts without question a Constitution’s statement that gives every indication of being out-of-date and self-serving. In fact, the article “Effect of reproductive rate on minimum habitat requirements of forest breeding birds”, by Melisa, D Vance, Melisa D, Leonore Fahig and Curis H. Flather, published in Ecology 84 (10) is the “first direct test for a negative relationship between minimum habitat requirements and annual reproductive rates”. It thus supersedes the article published in 1989 that the DEIS uses as the basis for its conclusions. Moreover, the article by Vance et al. gives as references over 100 other articles on the same subject. For FERC to rely on only one 25-year-old article provided to it by Constitution itself is therefore, a scientifically unacceptable methodology for a serious evaluation of the effect of the pipeline right-of-way through interior forest on forest birds. The article by Vance et al., moreover, says the following:
- “A major challenge facing conservation biologist and wildlife managers is to predict how fauna will respond to habitat loss. Different species require different amounts of habitat for population persistence, and it is imperative that we identify the factors that affect these habitat requirements. This study shows a clear negative relationship between a forest bird species’ reproductive rate and the amount of habitat required for a certain probability for presence in the landscape. This result brings empirical evidence to the long-held belief that species with low reproductive potential are more prone to extinction due to habitat loss than species with high reproductive potential. Until landscape-scale minimum habitat requirements need to maintain viable populations can be measured empirically, it will be necessary to maintain large tracts of forest through the breeding range to ensure population survival of all species.”
- The analyses and conclusions in this article alone eliminate the basis for the statement that 35 acres is the “minimum size of interior forest habitat that would support most interior forest bird species”. They indicate that: (1) FERC should be concerned not about “most” species of birds that would be affected but rather about those species that would be most affected because they require interior forest in order to ensure population survival; (2) scientifically valid analysis of the effect of fragmentation on the survival of bird species requires a landscape level analysis, not simply a statement of the minimum size of patches, as the DEIS provides; (3) an article from

- CO50-86 See the response to comment CO5-10 (wetlands). Section 4.8.4 of the draft EIS specifically mentioned the commentors’ concerns about the Clapper and Mud Lakes wetland complexes.
- CO50-87 The discussion of interior forest in section 4.5.3 of the EIS has been revised.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-764

CO50-87  
cont'd | 1989 is no longer a valid reference is no longer a valid reference for FERC to base its conclusion about the effect of the proposed pipeline on bird species. In sum, this section of the DEIS is completely unacceptable in its references and arguments and thus provides an entirely unsound basis upon which to rest FERC's conclusions with regard to the effect of the proposed pipeline right-of-way on the reproductive potential of bird species in the interior forest the pipeline will cut through. **FERC should re-write this section of the DEIS so that it is based on FERC's own analysis of up-to-date, scientifically sound data and research on the effect of a 100 foot wide right-of-way being cut through interior forest on the reproductive rate of bird species whose populations are declining in the landscape through which the proposed pipeline would pass.**

CO50-88 | **91. Comment p. 4-84**  
The DEIS says,  
  
"Constitution minimized the potential for these long-term effects by co-locating the proposed workspace with other rights-of-way in certain areas for approximately 9 percent of the proposed alignment, and by reducing the construction right-of-way to 100 feet in interior forest area, where able".  
  
Neither common sense nor scientific data support this superficial, dismissive statement. (1) It is obvious that Constitution did not "minimize the potential for these long-term effects" if it collocated only 9 percent of the pipeline, when the DEIS itself describes alternatives in which much longer distances could be co-located; (2) The co-location of 9 percent of the pipeline is inconsequential – only 11.2 miles out of 124 miles. Alternative M, or another route that largely collocates with the I-88 corridor, offers a route that would largely co-locate with an existing right-of-way and which would go through already disturbed habitat; (3) common sense indicates that 10 feet of difference in the width of a right-of-way cut through a solid block of interior forest will be inconsequential in "minimizing" the effects of fragmentation of interior forest; and (4) the DEIS provides no scientific data to support any of the assertions it makes in this section. **The DEIS should be revised so that it provides a serious, science-based analysis of the long-term effects on wildlife of cutting a 100 foot wide strip through interior forests.**

CO50-89 | **92. Comment p. 4-85**  
The DEIS says "...the creation of additional edge habitat could benefit foraging mammal species, such as white-tailed deer and raccoons..." and claims that would be a positive impact from the pipeline. There is no lack of edge habitat along the pipeline route while the area of interior forest is shrinking as forested land parcels are sub-divided. An overly dense population of white-tailed deer has already created serious forest management problems for the Charlotte Forest. White-tailed deer browsing of natural undergrowth has been scientifically proven to negatively affect the populations of many species of plants and animals. The pipeline would, according to this part of the DEIS, provide a corridor for even more deer to move into the Charlotte Forest. The increased deer population would cause the destruction of even more tree seedlings, making the forest's silvicultural and financial management even more difficult. **This section of the DEIS should be re-written to accurately discuss and evaluate the combined negative effects of the pipeline wildlife through fragmentation of interior forest species with its negative effects by increasing the populations of white-tailed deer.**

CO50-88 See the response to comment SA4-2 regarding interior forest and alternative M. See the response to comment CO9-1 regarding a reduction in the right-of-way width.

CO50-89 We acknowledge that modified habitat types can be a negative for some wildlife species, such as migratory birds in interior forests, but can be a positive for other species, such as deer in edge habitats. Although the proposed route would cross largely undisturbed lands within the Kernan parcel, our review of aerial photography indicated that several cleared areas and/or areas with herbaceous or scrub habitat (which may be attractive to deer), along with access roads, already occur on the Kernan parcel, as would be expected within a "working forest" that is subject to selected tree harvest.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont’d)

S-765

### CO50-90 | 93. Comment 4-86

The text does not support the conclusions. (1) To say that “our recommendation to develop an Upland Forest Mitigation Plan...would further minimize impacts on wildlife due to forest clearing” is patently false. The preparation of a plan in itself will do nothing to “minimize impacts on wildlife” – a plan is simply words on paper. (2) Benefits to wildlife would occur only if the plan formulated effective measures and if these measures were implemented effectively. (3) The statement fails to specify what type of wildlife the Upland Forest Mitigation Plan would benefit. Not all types of wildlife are of equal concern. (4) The public cannot know if Constitution really intends to prepare and implement this recommended plan, since FERC only recommends that to Constitution but does not specify what action it will take, if any, if Constitution does not prepare the Upland Forest Mitigation Plan. (5) Because Constitution intends to run its pipeline through private property, it would presumably need the cooperation of the affected landowners to formulate and implement an Upland Forest Mitigation Plan. As of April 7, 2014, Constitution has not consulted with the Kernan Land Trust about the Upland Forest Mitigation Plan, indicating that it is likely that Constitution has not consulted with any landowners about the content and implementation of this plan. It is unlikely, therefore, that the Upland Forest Mitigation Plan will be effective, even if it has been formulated. (6) It is not possible to comment accurately on a plan that does not even exist, yet the public in general, public agencies, such as the NYSDEC and the EPA, and landowners have a right to comment on such a plan. **This section of the DEIS should be revised to include the mitigation measures Constitution proposes for running the pipeline through upland forests, enforcement and compliance penalties, and the DEIS should be re-submitted for public comment on the Upland Forest Mitigation Plan.**

### CO50-91 | 94. Comment p 4-98

The DEIS says, “Constitution is still conducting surveys and consulting with FWS regarding federally listed threatened and endangered species that may be present in the project area...” and “Constitution has added additional access roads and contract yards that have not been reviewed by the agencies...” These statements indicate that the DEIS is seriously incomplete. **FERC should revise the DEIS to include all data that the DEIS itself says are required for a complete DEIS and then resubmit the completed DEIS for public comment.**

### CO50-92 | 95. Comment p. 4-104

That “...surveys to determine the presence/absence of additional species are ongoing...” clearly indicates that FERC itself believes that important data are still missing. If these data are important then FERC should not be making conclusions about how the proposed pipeline would or would not adversely impact any state-listed species. FERC should withhold making a conclusion until it has available the data that it believes are required. **FERC should revise this section of the DEIS to say that sufficient data are not yet available to make a conclusion about the adverse impact of the pipeline on state-listed species.**

### CO50-93 | 96. Comment p. 4-114

The DEIS says,

“If an easement cannot be negotiated with a landowner and if the projects are approved by the Commission, Constitution may use the right of eminent domain to acquire the property necessary to construct and operate its project.”

### CO50-90

Constitution’s Preliminary Migratory Bird and Upland Forest Plan was filed on May 6, 2014 ([http://elibrary.ferc.gov/0/idmws/file\\_list.asp?document\\_id=14213683](http://elibrary.ferc.gov/0/idmws/file_list.asp?document_id=14213683)). The plan was developed in coordination with the FWS and state agencies. The EIS has been updated with our assessment of this draft plan. See the response to comments FA4-29 and FA4-30 regarding mitigation and monitoring adherence to the proposed mitigation.

### CO50-91

See the response to comment FA1-1.

### CO50-92

See the response to comment CO50-68.

### CO50-93

The commentator’s statements regarding Constitution’s threats of eminent domain are noted.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-766

- CO50-93  
cont'd
- The statement confirms that fair negotiations, easement agreements or compensation irrelevant to Constitution, since if negotiations with landowners fail, Constitution will be empowered to take land by eminent domain.* Constitution has no incentive to engage in meaningful negotiations with landowners. The experience of the Kernan Land Trust confirms this attitude of Constitution. No employee of Constitution has ever talked to the Kernan Land Trust trustees directly about its plans to use our land for its pipeline. When an appointment to talk to a representative was made, he said he was too busy and sent two employees of Doyle Land Service. They were uninterested in a discussion and were clearly sent with instructions to intimidate the trustees with a threat that our only choice was between signing Constitution's easement agreement and having our land confiscated. **FERC should re-write the DEIS to recognize and discuss the fact that Constitution has used the threat of eminent domain to try to intimidate landowners into signing easement agreements.**
- CO50-94
- 97. Comment p. 4-114**  
Constitution sent us an easement agreement that John Lyons, Esq, counsel for the Henry S. Kernan Land Trust, reviewed, found to be completely unacceptable and advised us not to sign. In particular, our lawyer asked that the right-of-way be "extinguishable" if the pipeline were not built or did not cross our land. Constitution met our lawyer's attempts to open a discussion with inflexibility and non-communication, refusing, without explanation, this or any other modification in the easement agreement. This section of the DEIS does not, therefore, accurately convey: (1) how Constitution has used the power of eminent domain to intimidate landowners into signing easement agreements counter to their own best interests; (2) why Constitution is inflexible in the terms of its easement agreements; (3) what motivates Constitution to insist on an "inextinguishable" right-of-way. **FERC should revise the DEIS to discuss and evaluate how Constitution has been using the threat of eminent domain and easement agreements to intimidate landowners.**
- CO50-95
- 98. Comment p. 4-114**  
The DEIS does not mention how many landowners have or have not signed easement agreements with Constitution. These data are an important indication of whether landowners feel the pipeline will benefit or harm their own interests. **FERC should revise the DEIS to include discussion of the degree of acceptance and non-acceptance of easement agreements by landowners along the proposed pipeline route and analyze accurately the reasons for landowner resistance to signing easement agreements with Constitution.**
- CO50-96
- 99. Comment p. 4-125**  
In a previous filing with FERC, it was incorrectly stated that the DEIS did not mention the land of the Kernan Land Trust. In fact, on this page, the DEIS says,  
  
"...As noted in table 4.8.4-2, the proposed pipeline crosses approximately 1 mile of a Certified Green Tag Forest in Delaware County known as the Charlotte Forest. The Charlotte Forest is a 924-acre tract of land (NY-DE-226.000) named after the Charlotte River, which crosses the property. The landowners of the Charlotte Forest have filed several comment letters regarding impacts on the forest and request avoidance of the tract. The landowners state that the pipeline crosses Delaware County's largest block of interior forest and could introduce invasive species into the Clapper and Mud Lakes wetland complexes. Staff from the FERC met with landowners of the Charlotte Forest in September of 2012 to discuss their concerns and to conduct a site visit of portions of the Forest. In letters to FERC, the

- CO50-94
- The commentor's statements regarding Constitution's threats of eminent domain are noted. See the response to comment FA8-3 regarding easement negotiations.
- CO50-95
- See the response to comment CO50-22 regarding number of landowners that have signed an easement agreement. The number or percentage of landowners who may or may not have signed easement agreements is immaterial to the FERC's environmental review process.
- CO50-96
- See the response to comment CO50-62. See the response to comment FA6-10 regarding long-term monitoring of the pipeline right-of-way for invasive species.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-767

CO50-96  
cont'd | landowners of the Charlotte Forest reported that their coordination attempts with Constitution have been unsuccessful. Therefore, we have recommended in section 3.4.3.2 that Constitution further assess minor route deviations for tract NY-DE-226.000 (the Charlotte Forest) in coordination with the landowners and either incorporate a route that avoids the resources of concern or otherwise explain how potential impacts on resources have been effectively avoided, minimized, or mitigated."

As of April 6, 2014, Constitution had made no contact with trustees of the Kernan Land Trust in order to obtain the additional information that the DEIS requests and had given no indication of how it intends to comply with FERC's requirement stated on this page. Dr. Bernd Blossey, an international authority on invasive plant species, and supervisor of the Director of the New York State Invasive Plant Institute at Cornell University, in a letter to FERC dated March 23, 2014, indicated his profession experience and scientific research have shown clearly that it will be impossible to avoid, minimize or mitigate the spread of aggressive introduced species into the Clapper Lake – Mud Pond wetland from the proposed route. **FERC should therefore require Constitution to find an alternative route around rather than through the Kernan Land Trust land.**

### CO50-97 | 100. Comment p. 4-134

The proposed pipeline route in Delaware County runs along the northern border of the county through the townships of Franklin, Davenport and Harpersfield. These towns have different socioeconomic characteristics from each other and from other townships in Delaware County. To be accurate and useful the DEIS should present data on the populations of these towns and used these data to draw its conclusions. **The DEIS should be re-written to provide socioeconomic data on the specific townships through which the pipeline's proposed route passes and draw its conclusions based not on data for the whole counties but for the specific affected townships.**

### CO50-98 | 101. Comment p. 4-136

We note that in numerous newspaper articles and radio advertisements, Constitution has been promoting the pipeline as a way to create jobs in the area of New York where the pipeline will run. According to the DEIS, the pipeline will create "...an estimated 5 indirect hires during operation. Operation of Iroquois' project would require no additional workforce. **FERC should fairly balance the five new, indirect jobs against the many jobs and economic activity that will be lost due to declines in property values for first and second homes, loss of tourism income, and loss of production from agriculture and forest management.**

### CO50-99 | 102. Comment p. 4-136

Here the DEIS provides only the benefit side of what should be a balanced, rather than one-sided cost/benefit analysis. The DEIS claims that the pipeline will generate \$113 million in economic benefits and 224 jobs. Basic cost/benefit analysis methodology requires that it should also examine the potential for loss of income, property values, real estate taxes and jobs to be lost over the project life. **The DEIS should be revised to include not only the benefit side but also the cost side of a cost/benefit analysis.**

### CO50-100 | 103. Comment p. 4-136

The DEIS's discussion fails to recognize that the economy of the region through which the proposed pipeline will pass is directly connected to its undisturbed lands, clean air and water,

CO50-97

The commentator's statement regarding the scope of the socioeconomic analysis is noted. Our level of analysis is consistent with the FERC standard (Guidance Manual for Environmental Report Preparation, August 2002) Executive Order 12898, and CEQ guidance (CEQ 1997a) and is sufficient for an adequate assessment of potential impacts.

CO50-98

Section 4.9.1 of the EIS further states that the proposed project would result more than 325 local jobs and 281 indirect jobs during construction. Section 4.9.5 has been updated with new information concerning property values. As stated in section 4.9.2 of the EIS, the impacts on tourism due to construction of the pipeline are expected to be minimal.

CO50-99

We concluded in section 4.9.5 of the EIS that there is no clear evidence that the presence of a pipeline results in decreased property values. Property taxes are discussed in section 4.9.5 of the EIS. Also, construction and operation of the projects are not expected to result in the loss of jobs or income.

CO50-100

Constitution and the FERC have worked to minimize impacts on businesses that would be impacted by the projects. As discussed in section 4.9.5 of the EIS, Constitution would compensate landowners at current market value for any crop damage, or measureable loss resulting from construction of the project. In addition, landowners would be compensated for any marketable timber that is removed from their property during construction. As stated in section 4.8.2 of the EIS, an easement agreement between a company and a landowner typically specifies compensation for losses resulting from construction, including losses of non-renewable and other resources, damages to property during construction, and long-term restrictions on existing uses that would not be permitted on the permanent right-of-way.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-768

CO50-100  
cont'd

agriculture, outdoor recreation, including hiking, hunting, and fishing. The proposed pipeline would degrade these important assets that are currently the basis of the local economy. Since 1946, for example, the areas of the Charlotte Forest that are capable of producing forest products have yielded approximately two million board feet of timber, poles, pulp wood and firewood worth about \$1.5 million. This income has been used almost entirely to pay school, town, county and federal taxes. At no cost to any level of government, the Charlotte Forest has provided the public benefits of reliable flows of clean water, habitat for thousands of species of plants and animals, recreation for hundreds of visitors and protection of pristine wetlands of regional and statewide significance. The routing of the Constitution Pipeline through the Charlotte Forest would reduce its financial viability. The proposed pipeline would traverse about 80 acres of timber stands that are growing with the Charlotte Forest's most valuable future timber crops. The growth rate and quality of the trees on these stands have been improved through multiple applications of silvicultural practices, such as thinning, releasing and pruning. At a moderate growth rate of 200 bd.ft/acre/yr. at least 16,000 board feet of commercial wood per year grow on these 80 acres. At a moderate value of \$500 per thousand board feet the value of the timber in these stands is increasing by \$8,000 per year. Over the course of a rotation of 80 years the value of the timber on these 80 acres will grow by approximately \$640,000. The proposed pipeline would cross the principal access road to a large part of the Charlotte Forest and directly under the only suitable log landing site on that portion of the forest. It would increase the cost and complexity of the woods operations necessary to manage the forest and harvest the timber. The Charlotte Forest is only one of over a thousand rural properties that the proposed pipeline will cross. It is likely that on many of these other properties, the pipeline will cause similar direct and indirect negative financial and economic impacts. **The DEIS should be revised to include reliable data and analysis of the financial costs that the location of the pipeline through productive private properties, such as the Charlotte Forest, and through a landscape that provides the current economic base for the region.**

CO50-101

**104. Comment p. 4-136**

The DEIS's discussion fails to recognize that the economy of the region through which the proposed pipeline will pass is directly connected to the beauty of its landscape, its undisturbed lands and forests, its clean air and water and opportunities for healthy outdoor recreation. These natural assets underlie the investments being made in second and retirement homes. The market in second and retirement houses in turn maintains property values, increasing the tax base. The people who own and live in second or retirement houses in stimulate the local economy with their expenditures on repairs and maintenance, as well as purchases in local stores and payment for services. The DEIS ignores the importance of an attractive environment in the economic basis of the region through which the proposed pipeline would pass. It provides no data on the value of second-homes or houses that retired people have bought and reconstructed. It does not analyze the effect of the pipeline on the attractiveness of the region for such investments. **The DEIS should be re-written to rigorously analyze with data the direct, indirect and cumulative economic costs that the proposed pipeline will cause.**

CO50-102

**105. Comment p. 4-138**

The DEIS says,

"Constitution could require police, fire and medical services, depending on the type of emergency; however, the anticipated demand for these services is not expected to exceed the exiting capabilities of the emergency service infrastructure."

CO50-101

The commentator's statement regarding the attractiveness of the landscape of the project area is noted. Visual impacts and tourism are discussed in sections 4.8.6 and 4.9.2 of the EIS, respectively. There are existing linear projects already located within the project area such as pipelines, power lines, and roads, as well as other developments. Outdoor recreation areas are discussed in section 4.8.4 of the EIS, and water resources and air quality are discussed in sections 4.3.2 and 4.11.1 of the EIS, respectively. The commentator's statement regarding the market for second / retirement homes is noted as well. Our analysis of property values (and tax bases) would be relevant to all home sales regardless of whether they were primary, secondary, or retirement residences, and are discussed in sections 4.9.5 (property values) and 4.9.7 (tax bases) of the EIS. Section 4.9.5 has been updated with new information concerning property values.

CO50-102

Table 4.9.3-1 of the EIS provides a summary of the number of fire departments, police departments, schools, hospitals, and hospital beds in the area of the proposed projects. The data contained in table 4.9.3-1 were used as the basis for the statement that the public service infrastructure appears to be adequate. Emergency personnel would only be needed in the event of an accident, thus anticipated demand cannot be estimated or surmised.



# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-769

CO50-102  
cont'd

And it says,

“...there appears to be adequate public service infrastructure in the project vicinity to accommodate the temporary needs of 975 non-local construction workers and their families”.

These statements: (1) are based on assertions by FERC since it does not quantify either the “anticipated demand” or the “existing capabilities of the emergency service infrastructure” – FERC should not rely on assertions in the preparation of a DEIS, especially one intended for public comment. It should provide data to support its statements; (2) do not quantify the extra costs that the local governments, and therefore, local taxpayers will have to support in order to provide Constitution with its “anticipated demand for these services”. In the DEIS, FERC should recognize that local taxpayers should not be forced to assume any extra costs for the “anticipated demand” that Constitution will place on them during construction or operation of the pipeline; (3) do not explain what types of emergencies Constitution foresees or their degree, frequency, timing or location in relation to the Proposed Actions; (4) do not identify or discuss any relationship between the “anticipated services” and the alternative routes; and (5) use the word “appear” as the basis for drawing conclusions, a word that indicates that FERC does not really know if there is adequate public service infrastructure or not. **FERC should revise this section of the DEIS to identify accurately, fully, and comparatively the anticipated impacts on availability and costs of providing services to Constitution during the construction and operational phases of the pipeline on the different alternative routes and the effect of providing these services on the budgets and capabilities of the local governments that provide them.**

CO50-103

### 106. Comment p. 4-139

The DEIS describes the “Community Grant Program” that Constitution has established and says it “...was established to identify and help fund noteworthy projects that benefit the surrounding communities” but that it does not “...plan to link its Grant Program to mitigation that may be required by regulatory agencies”. This section does not explain why Constitution decided it wanted to “...identify and help fund noteworthy projects...” if they supposedly have nothing to do with the Constitution pipeline as implied here. Constitution obviously established its “Community Grant Program” in order to increase acceptance or support of local government of its project. In this section of the DEIS, FERC should have denounced Constitution’s blatant use of money to increase its influence and augment support for its projects among local officials. **FERC should revise the DEIS to include an accurate analysis of why Constitution decided to fund its Community Grant Program.**

CO50-104

### 107. Comment p. 4-141

In this section, FERC claims that the presence of a pipeline on a property will not affect the property’s commercial value. The following points refute this assertion:

- Common sense alone indicates “...the presence of a pipeline and the restrictions associated with a pipeline easement could...influence a buyer’s decision to purchase a property...” Who would be willing to pay current market value for a property once it has a 30 inch gas pipeline running through it and an easement that gives perpetual control of part of the property to a gas and oil company?

CO50-103

The commentator’s statements regarding the community grant program are noted. An analysis of the program is beyond the scope of the EIS, as is an assessment of how a project sponsor might attempt to generate public support for its project.

CO50-104

Section 4.9.5 has been updated with new information concerning property values.



# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-770

CO50-104  
cont'd

- The value of the property belonging to the Kernan Land Trust derives largely from its pristine character and its lack of introduced plant species. Dr. Blosssey, a world authority on introduced plant species, is certain that the construction and operation of the pipeline will cause introduced plant species to infest Clapper Lake and its surrounding wetlands. The commercial value of the property will therefore decline. **The DEIS should acknowledge that the proposed pipeline negatively affects the quality of those natural features and the commercial value of the property will decline.**
- The DEIS addresses the environmental consequences of a proposed pipeline, not of hydro-fracking. The pipeline will likely lower the cost and risk of doing hydro-fracking nearby. Lower costs will increase the probability of hydro-fracking occurring. Contrary to what the DEIS says, academic studies and news reports do indicate that nearby oil and gas infrastructure depress property values. The paper "Impact of Oil and Natural Gas Facilities on Rural Residential Property" by Peter C. Boxall, Wing H. Chan, and Melville L. McMillan examined the impact of oil and gas facilities on rural residential property values using data from central Alberta, Canada and found they have "...a significant negative association with property prices." The article published in 2013 in the New York Times entitled "Gas Drilling Jitters Unsettle Catskills Sales" said the "...prospect of hydraulic fracturing has spooked potential buyers..." and quoted a realtor who shut down her business in Wayne County, Pennsylvania. Homeowners were having trouble selling rural properties "because people don't want to be anywhere near the drilling." In a 2005 peer-reviewed study, researchers found that oil and gas production "significantly affect the sale price for rural properties," and that the presence of oil and gas facilities within 2.5 miles of rural residential properties in Alberta, Canada reduced property values with the potential for doubling the decrease, depending on the level of industrial activity.
- Recently, Texas landowners won a \$2.1 million judgment against a pipeline in pipeline easement disputes, after their parcel of land lost value because an easement was taken for a gas line, the third time Texas property owners recently have prevailed in similar eminent domain cases.
- In previous cases (e.g. Transcontinental Gas Pipeline (124 FERC 61160 P57, 2008) FERC has acknowledged that use of land abutting a long established pipeline will not significantly impact land value while they will impact the value of land along a new route.

**The DEIS should be re-written to acknowledge that property values will likely decline when encumbered by an inextinguishable right-of-way for a natural gas pipeline and when invasive species have infested formerly pristine wetlands and to make reference to the publications that indicate a fall in property values near oil and gas infrastructure.**

CO50-105

### 108. Comment p. 144

The DEIS makes the assertion that "Construction and operation of the project would have a beneficial impact on local sales tax revenue; but that "...these impacts would be limited to the duration of the construction period". The construction period is finite, but the local economy will be around a lot longer. In this section, FERC ignores the long-term effect on sales taxes of a decrease in the attractiveness of the area along the pipeline for residents. Many people who can afford to move to other areas out of the range of influence of the pipeline will be likely to, while many people who cannot afford to move away will not, so the clear potential exists for the pipeline to lower revenues from sales tax after the pipeline is constructed. **FERC should revise**

CO50-105

See the response to comment CO50-101.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-771

CO50-105 cont'd	the DEIS so that it accurately analyzes the long-term effect of the proposed pipeline on sales taxes rather than just the short-term effect.
CO50-106	<p><b>109. Comment p. 4-144</b></p> <p>The DEIS says that the proposed pipeline would "...increase...annual property taxes by \$4.9 million in Delaware County..." without providing any reference for this assertion. The DEIS also says that "the landowner would not be bear any responsibility for increased property taxes resulting from installation or operation of the pipeline", without providing any explanation of why FERC believes such an increase in property taxes would occur, in spite of the arguments presented above that it is likely that property values will decline if the proposed pipeline runs through a property. Nor does the DEIS explain the mechanism Constitution would use to reimburse landowners or compensate local governments for increases in property taxes if they were to occur – this sounds like an empty, unenforceable, unlikely assertion. <b>If FERC has data to support these various assertions they should be referenced in this section of the DEIS. If it does not have such data, then it should obtain and analyze accurate data as to the effect of the pipeline on real estate tax income for local governments.</b></p>
CO50-107	<p><b>110. Comment p. 4-145</b></p> <p>The DEIS says, "FERC staff participated in all of Constitution's open houses to receive input from the public about the pipeline project". Trustees from the Kernan Land Trust attended several of Constitution's open houses. They found them to be ineffective in providing input from the public. (1) They were intimidating. (2) There were an overwhelming number of Constitution representatives who were aggressive and had clearly been trained on how to approach timid and confused landowners by evading difficult questions. (3) There were no chairs. (4) The space was small, loud, and extremely crowded so that the atmosphere felt competitive. (5) It was impossible to see the maps spread out and overlapping each other on tables. Maps were not available or easily obtainable of specific sections to affected landowners. (6) The meetings were so long that after five hours of waiting, at least one HSK Trustee had to give up waiting to speak and left. <b>This section of the DEIS should be re-written so that in addition to providing a quantitative description of Constitution's open houses it provides an accurate, unbiased data-based qualitative analysis of how effective they were in achieving their purpose of providing input from the public about the pipeline project.</b></p>
CO50-108	<p><b>111. Comment p. 4 - 145</b></p> <p>The DEIS says, "Going forward, stakeholders will have the opportunity to ...participate in public meetings that will be held in the area of the projects..." A trustee of the Kernan Land Trust attended the meeting organized by FERC in Oneonta on April 1, 2014. FERC meetings about the DEIS in Oneonta April 2 did not achieve their objective of providing an opportunity for stakeholders to participate in public meetings, for the following reasons: (1) Landowners and those directly affected were not given priority to speak. (2) The representative of the Kernan Land Trust drove three hours to speak for a mere three minutes. (3) Dressed in shocking orange so as to appear overwhelming, people were brought by bus from outside of the area in order to disrupt and intimidate people who are opposed to the construction of the pipeline. They deliberately waved a camouflage hat with the Constitution logo on it in front of one Trustee's face, as well as very large signs to obstruct her view of the speakers. (3) They spoke foully to each other while speakers were presenting. (3) Overheard conversations made it clear they did not even know what the issue was, other than there was a pipeline proposed. (4) Most of their snide, not so quiet, remarks were about the appearance of the speakers. (5) Their signs were</p>

CO50-106	As stated in table 4.9.7-1 of the EIS, the source for data regarding property taxes during construction and operation of the proposed projects was the Center for Governmental Research. Constitution and Iroquois would be assessed property taxes by the counties and would make payments directly to the counties. As we have reached the conclusion that property values would not decline as a direct result of the project, it is reasonable to assume that property taxes could increase as value of the land increases over time, and therefore, the Applicants' tax assessments would likely also rise.
CO50-107	See the response to comment CO50-27 regarding Constitution's open house meetings.
CO50-108	See the response to comment CO29-1. The commentor's statement regarding the draft EIS comment meetings are noted. The FERC held four comment meetings to hear comments on the proposed projects. The panel instructed the audience to respect all attending and speaking at the meetings. Some meetings were more heavily attended than others. Because the purpose of these meetings was to obtain comments on the Draft EIS, speakers were called in their order of attendance to the meetings (during our scoping meetings preference for potentially affected landowners was given). The draft EIS comment meetings are public meetings and anyone is invited to attend regardless of whether they support or oppose the project (or simply have concerns), for whatever reasons that are personal to them. All comments, regardless of how they are provided, were considered equally, appended to this EIS and directly responded to by FERC staff.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-772

- CO50-108 cont'd about jobs and the meeting was about the environmental impact of the proposed pipeline. In sum, the FERC hearings on the DEIS did not provide sufficient time or conditions for affected people to provide FERC with meaningful comments. **FERC should schedule additional hearings and organize them so that the timing and conditions permit those affected by the proposed actions to make useful, thorough comments on the DEIS.**
- CO50-109 **112. Comment p 4 – 153**  
One of the attractions of the Charlotte Forest is its long stretches of stone walls, five cellar holes, two barn sites, three hand-dug wells, an old town road, and a monument to the Trustees' mother. The route Constitution proposes through the forest for its pipeline would obliterate some of these stone walls, cellar holes, barn sites and wells these historical features. It would pass approximately 100 feet from our mother's monument through the area where her ashes were scattered. Destruction of the Charlotte Forest would likely end in its dissolution as a solid forest unit and would probably lead to the end of the Charlotte Forest as a family owned and managed conservation unit. Reasonable alternative routes exist that would avoid the destruction of emotional and historical resources. **FERC should instruct Constitution to realign its proposed route to an alternative route where destruction of emotional and historical resources would be avoided.**
- 113. Comment p. 4-197**  
The DEIS says, "Constitution has stated that they would reimburse the landowner for any loss of damage to their property as a result of an incident with the operation of the proposed pipeline...not limited to, replacement, repair, rental, or straight compensation of the damage". No compensation would be compensate the Kernan Land Trust for any level of damage to water bodies and wetlands on its lands, so this section of the DEIS is inapplicable to damages on its property. **FERC should re-write the DEIS to require Constitution to site the proposed pipeline off the land of the Kernan Land Trust so that there is no risk that its operation will cause damage to its wetlands and water bodies.**
- CO50-110 **114. Comment p. 4-203**  
The DEIS calls a 31% "...relatively modest allowance for increased capacity... and "...would likely preclude the use of the Constitution line for use as "...a major conduit for newly emerging gas supplies, should they occur." This statement is troubling in two ways. (1) A 31% increase in capacity can by no stretch be considered "relatively modest"; and (2) the section does not discuss how long the supplies from Pennsylvania can be expected to continue. If those supplies peter out at some time over the life of the pipeline, then the pipeline could be used "...as a major conduit for newly emerging gas supplies"; (3) other ways to transport the existing supplies of natural gas could be found or constructed, which again would open the proposed pipeline for use for "...newly emerging gas supplies". **FERC should re-write this section of the DEIS to change or adequately explain the statement that a 31% increase is modest and to analyze fully and accurately the potential for the proposed pipeline to be used for "newly emerging gas supplies" as per points (2) and (3).**
- CO50-111 **115. Comment p. 4-214**  
The statement that "...hydraulic fracturing...has been in use for over 50 years..." ignores the much more recent use of high-volume hydraulic fracturing, which has been in use only in the last decade or so. Obviously, this is not the same type of hydraulic fracturing that was used fifty years ago, as this statement misleadingly implies. **FERC should revise this statement in the DEIC**

CO50-109 The commenters' statements regarding historical resources on the property are noted. Historic resources are typically avoided, or potential impacts are minimized or mitigated, once field survey crews locate and document them. See the response to comment FA4-3 regarding pending surveys. We have included a recommendation in section 4.10.4 of the EIS that Constitution not begin construction (if approved) prior to completion of all NHPA section 106 consultation. The landowner has not allowed Constitution access to survey the parcel. The comments regarding the project resulting in the likely dissolution as a solid forest unit, leading to the end of the Charlotte Forest as a family owned and managed conservation unit, and that no amount of compensation would be sufficient are noted. Section 3.4.3 of the EIS has been revised with new information regarding the Kernan Land Trust property and our assessment of potential impact avoidance, minimization, and mitigation measures.

CO50-110 The commentor's statements regarding the relative modesty of an increase in Constitution's capacity is noted. In the context of interstate natural gas transportation, available supply, and regional demand, a theoretical 31 percent increase in potential delivery is modest. Section 4.13 of the EIS has been updated in regard to continuing natural gas supply in Susquehanna County, Pennsylvania. See the responses to comments SA6-7 and LA1-4. See the response to comment LA9-4 regarding natural gas reserves.

CO50-111 The commentor's statement is noted. However, section 4.13.1.1 of the EIS states, within the last 20 years, the petroleum industry has developed the horizontal drilling technique in conjunction with hydraulic fracturing (fracking), which has been in use for over 50 years, to recover natural gas from shale reservoirs. The statement already refers to hydraulic fracturing (not horizontal drilling or high-volume hydraulic fracturing) as being in use for over 50 years.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-773

CO50-111  
cont'd | so that it accurately reflects the advent of a new, more effective and widely used method of hydraulic fracking in the last few years.

CO50-112 | 116. Comment p. 4-222

The DEIS says, "Sediment loading could also occur as the result of runoff from construction activities near wetlands and water bodies..." and that "wetlands and water bodies could also be adversely affected by a spill of hazardous liquids ...during trenching". It says that "Constitution would minimize these effects by implementing wetland and water body construction mitigation measures...". Perhaps there are wetlands where the effect of sediment loading or the spill of hazardous liquids could be "minimized" but the Clapper Lake – Mud Pond wetland complex is certainly not one of them. These are pristine wetlands and water bodies whose water flows out very slowly. Almost any level of sedimentation or flow of hazardous materials into them will thus have a permanent negative effect on their plants, animals and ecosystem functions. Moreover, the pipeline runs through part of the wetland complex. **In order to avoid any risk to these unique, pristine wetlands, FERC should require Constitution to re-route its pipeline so as to avoid them entirely.**

CO50-113 | 117. Comment p. 222

The DEIS says, "Constitution has reduced its construction right-of-way from 110 feet to 100 feet (except in areas of steep slopes) in order to reduce impacts on upland interior forests". It has provided no scientific evidence that a reduction of 10 feet in the right-of-way will reduce impacts on upland interior forests. The description, discussion and conclusions of the DEIS regarding the width of the right-of-way are incomplete, confused and inconsistent. **FERC should re-write the DEIS to explain clearly why it agrees with Constitution's plans for 110, 100 and 75 foot rights-of way.**

CO50-114 | 118. Comment p. 4-224

The DEIS says,

"In general, wildlife is expected to return to affected areas following construction of the proposed projects and other projects in the areas" ...and that "...some of the wildlife displaced during construction of any of the projects would return to the newly disturbed area and adjacent undisturbed habitats after completion of construction."

This statement is inaccurate in several ways: (1) the use of the phrase "In general" masks the inevitable and irreversible negative impact that construction of the pipeline will cause on specific sites. And it is precisely these sites that are most important to protect from negative impacts, because they are the pristine, undisturbed sites where construction will inevitably cause irreversible, severed negative impacts. A prime example of such a specific site is the Clapper Lake – Mud Pond wetland complex on the Kernan Trust property. Because the proposed route is a *greenfield* rather than an alternative *non-greenfield* route, it is likely that there are numerous other such specific sites that the DEIS should not brush off by using the phrase "In general". (2) The use of the general term "wildlife" masks the type of wildlife that can be "...expected to return....". Not all "wildlife" is equally important: rats, white-tail deer, woodchucks, field mice are not the equivalent of interior forest birds, such as wood and hermit thrushes, whose populations are declining along the proposed greenfield route of the pipeline; (3) the use of the term "some" masks the quantity of the wildlife that would return. Perhaps only a small percentage of the wildlife would return and the DEIS should not dismiss that fact by using the

CO50-112

See the response to comment CO5-10 (wetlands). See the response to comment CO41-16 regarding erosion controls. See the responses to comments CO7-2 and CO16-3 regarding Constitution's spill plan.

CO50-113

A description of Constitution's proposed right-of-way configurations can be found in section 2.2.1.2 of the EIS. See the response to comment CO9-1 regarding interior forest.

CO50-114

The commentator's statements regarding wildlife and cumulative impacts are noted. The EIS acknowledges that some habitats would permanently be altered such as conversion of forest to maintained, grassy right-of-way in some locations and that these changes would affect wildlife. For example, section 4.6.1 of the EIS states that "The fragmentation of large forested tracts during construction and operation of the project could create long-term impacts on BCCs (*author note - birds of conservation concern*) by reducing available breeding, nesting, and foraging habitat for interior nesting species, such as the wood thrush, cerulean warbler, and Canada warbler, which are present within the project area." See the response to comment FA4-29 regarding indirect effects to forest resulting from creation of a new forest edge and updates to the EIS. During operations, Constitution would mow up to a 50-foot-wide permanent right-of-way no more than once every three years; however, a 10-foot-wide swath may be mowed more frequently to facilitate routine patrols and emergency access. The mowing would be conducted outside of the April 15 to August 1 window to avoid impacts on nesting birds. As described in table 2.6-1 of the EIS, patrolled inspections during operations would occur at intervals of several months. We conclude that due to the timing and relative infrequency of maintenance and inspection, impacts on wildlife would be minimal.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-774

CO50-114  
cont'd

word “some”; (4) the use of the term “adjacent undisturbed habitats” masks the fact that adjacent habitats to the right-of-way in interior forests will be inevitably, irreversibly and severely affected by the right-of-way. The DEIS itself states that there will be an “edge effect” from the right-of-way, so it must also admit that this edge effect will extend into “adjacent undisturbed habitats” and it should discuss how far that effect will be based on scientific data and research; and (5) the statement refers only to the construction phase of the project, but not the operational phase. Yet the DEIS says that the right-of-way will be patrolled weekly by airplane, will be inspected weekly by foot or vehicle and will be mowed sufficiently frequently to keep the vegetation to a little above ground level. These operations, though their noise, presence of humans, and change to vegetation will inevitably affect the wildlife in and adjacent to the right-of-way in its numbers, species composition and reproduction rate. **FERC should re-write this section of the DEIS so that it analyzes fully based on scientific evidence the cumulative effects of the construction and operation of the proposed pipeline on wildlife over the entire operating time of the pipeline.**

CO50-115

**119. Comment p. 4-225**

As throughout the DEIS, FERC concludes that “...past and present projects in combination with the proposed project would have minor cumulative effects to (sic) special status species” because they would be reduced or eliminated through conservation and mitigation measures identified during relevant permitting processes. Through this formulaic reference to other permitting processes that will formulate mitigation measures, FERC has discovered a way to reach the conclusion that a huge pipeline project through a greenfield route will have minor negative environmental effects even compared to reasonable non-greenfield alternatives! **FERC should take more seriously its duty as a public agency to consider and protect environmental and public interests rather than so easily dismiss the huge negative effects that placing the pipeline on a greenfield route will inevitably and irreversibly cause and re-write the DEIS as a serious document rather than one that takes every opportunity to endorse Constitution’s preferred route – especially because the DEIS never explains why FERC and Constitution prefer a greenfield over a non-greenfield route.**

CO50-116

**120. Comment p. 4-227**

The DEIS says “Constitution has estimated that the Constitution Project would “...fill up 1,300 new jobs”. (1) FERC should not simply accept Constitution’s assertions about the number of new jobs that the project will create. After all, FERC in the Executive Summary claimed that its own staff prepared the DEIS. This statement only confirms that FERC staff lifted information from Constitution’s Resource Reports without checking its validity. (2) The statement does not say that these are temporary, not permanent jobs. According to the DEIS itself, Constitution will provide no full-time permanent jobs and only five indirect permanent jobs. This is a far different picture of how Constitution will affect employment that that conveyed in this section. **FERC should re-write this section of the DEIS so that it uses its own data and analyses rather than Constitution’s and so that it accurately states the number of full-time, permanent jobs the proposed project will create, especially for local rather than non-local people.**

CO50-117

**121. Comment p. 4-230**

The forests of upstate New York sequester huge amounts of atmospheric carbon and much of that carbon is sequestered permanently in the high-quality, valuable wood products which are produced from the most common forest species, such as sugar and red maples and oaks. The DEIS says nothing about the effect that the fragmentation and degradation of the forest that the

CO50-115

Section 3.0 of the EIS provides a comprehensive analysis of the proposed route as compared to other alternative routes. The analyses and justification for route comparisons are provided there.

CO50-116

As stated in section 4.9.1 of the EIS, the Center for Government Research examined the economic benefits of the proposed projects, including providing an estimate on the number of direct and indirect jobs. As stated in section 4.9.1 of the EIS, an estimated seven new full-time, local employees would be directly hired to operate the facilities on a permanent basis. The creation of new, full-time positions would result in an estimated 5 indirect hires during operation. Operation of Iroquois’ project would require no additional workforce.

CO50-117

See the response to comment FA6-13.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

S-775

- CO50-117  
cont'd | pipeline will cause on its ability to sequester permanently atmospheric carbon. **FERC should revise this section of the DEIS to discuss accurately the contribution the forest through which Constitution intends to run its pipeline make to the sequestration of atmospheric carbon and the effects on that contribution that the construction of the pipeline on the proposed greenfield route will make compared to the effects that would be caused on a non-greenfield route.**
- CO50-118 | **122. Comment p. 4-232**  
The conclusion that “The majority of cumulative impacts would be temporary and minor, is unsupported by the previous discussion and by information and analyses that are missing from the previous discussion. The conclusion incorrectly gives the same weight to the “long-term cumulative impacts...on wetland and upland forested vegetation and associated wildlife habitats” as to “Short-term cumulative benefits ...realize through jobs and wages and purchases of goods and materials”, not a proper methodology. **FERC should revise the conclusions in this section to reflect accurate data and information and to give more weight to long-term, irreversible, inevitable severe negative impacts than to short-term benefits from temporary jobs and purchases.**
- CO50-119 | **5.0 Conclusions and Recommendations**  
**123. Comment p. 5-4**  
The DEIS concludes that “The majority of wetland impacts would be from temporary workspace; ...these area would return to pre-construction conditions following construction”. This conclusion is completely unwarranted and is supported by no scientific evidence or studies. It takes at least 100 years for forest to return in the uplands through which the pipeline will cross. On our land, only now, over a hundred years after much of this land was removed from agriculture, have the clear-cut areas returned to mature forest land. As stated by Dr. Blossey in his letter to FERC, invasions of wetlands by aggressive exotic plant species have been found impossible to reverse and will be inevitable and irreversible if the pipeline were to be constructed and operated on our land. **Given the inaccuracy, unsupported nature of this statement, the DEIS should be revised to eliminate its false conclusion that the wetland, especially forested wetlands, would return to its pre-construction conditions.**
- CO50-120 | **124. Comment p. 5-5**  
The statement that “Constitution would conduct annual post-construction monitoring of all wetlands affected by construction...” is contradicted in section 3 where it says that such monitoring will occur for only three years after construction. If Constitution intends to operate its pipeline for 80 years then it should be required to indicate and the DEIS should evaluate how it proposes to monitor the wetlands it will affect for at least the entire 80 years. **The DEIS should be revised to evaluate properly the monitoring program Constitution has proposed for monitoring of wetlands.**
- CO50-121 | **125. Comment p. 5-5**  
There is an existing “Williams Central” in PA and a terminating compressor that Iroquois will expand at Wright, NY. Constitution claims that these two stations provide enough compression for the proposed pipeline. Based on what happened with the Millennium, where Minisink and Hancock compressor stations were announced within a few years, Constitution is likely to add more compressor stations to its proposed pipeline. **The DEIS should discuss the likely need**

- CO50-118 | The commentator’s statement regarding cumulative impacts is noted. We have updated the cumulative impacts assessment and the conclusion.
- CO50-119 | Section 5.1.4 of the EIS states that the majority of wetland impacts would be from temporary workspaces (75.7 acres); these areas would return to pre-construction conditions following construction. We acknowledge that this would be a long-term impact in some instances taking decades to recover to pre-construction conditions. The section further states that Constitution would maintain a 30-foot-wide corridor with selective removal of trees within forested wetlands, impacting a total of 12.5 acres through the operational life of the project.
- CO50-120 | Constitution would conduct annual post-construction monitoring of all wetlands affected by construction to assess the condition of revegetation and the success of restoration for three years or until revegetation is successful. If revegetation is unsuccessful after three years, under the direction of FERC, Constitution would develop in consultation with a professional wetland ecologist a remedial revegetation plan to actively revegetate the impacted wetlands.
- CO50-121 | See the response to comment FA4-2.

# COMPANIES AND ORGANIZATIONS

## CO50 – Kernan Land Trust (cont'd)

CO50-121  
cont'd for additional compressor stations and evaluate the indirect and cumulative impacts of such additional compressor stations.

### CO50-122 Appendix H

#### 126. Comment H-6

In Appendix H, the DEIS appears to referring to Kernan Trust Land in the following sections:

- **“MP 90.0:** “This deviation was developed to avoid forested land. This route deviation was not adopted. Constitution determined that re-route affects several new landowners to avoid one landowner. The route adds several additional turns and is not the most favorable route. This reroute is also close to a cemetery at Titus Lake Rd. crossing. It also parallels propane line that has had issues in the past.”
- **Mile Post 90.8:** “This deviation was developed to avoid sensitive land features. This route deviation was not adopted. Determined that re-route would impact 26 new landowners if implemented.”
- **Chapter 3, p 3-60 Table 3.4.3-1:** In this table, land parcel NY-DE-137.000 is listed as one of 13 properties for which FERC is “...requesting that Constitution provide additional information as described above”. “

That these references to the Trust land in the DEIS are misleading, confusing, incomplete and inaccurate is supported by the following observations:

- In Appendix H, the note regarding the proposed deviation at MP 90.0 states that it “...was developed to avoid forested land” and the note regarding the proposed deviation at MP 90.8 says it was “developed to avoid sensitive land features”. . Yet in Chapter 3, Table 3.4.3-1 says that the deviation at MP 90.8 “was developed to avoid forested land”.
- The Trust, as noted above, has repeatedly, verbally and in written form, communicated its concern that the proposed route through Trust land would cause inevitable, irreversible and intense negative impacts on the currently pristine Clapper Lake – Mud Lake wetland complex. Yet the DEIS, as noted in (1) says that the deviations were developed to avoid “forest land” and “sensitive features”. The use of these terms in itself indicates that that the DEIS ignores the unique characteristics of the Clapper Lake – Mud Lake wetland complex.
- In previous cases (e.g. Transcontinental Gas Pipeline (124 FERC 61160 P57, 2008) FERC has acknowledged that use of land abutting a long established pipeline will not significantly impact land value and that the impacts to landowners along an ROW tend to be more minimal than impacts to landowners along a new route. The statement that the minor deviation the Kernan Land Trust has suggest would “...would affect 26 additional landowners”, therefore, does not capture correctly FERC’s policy for considering the impact of a proposed pipeline on owners along an existing right-of-way. Assuming that all or part of these 26 landowners may be those already encumbered by the propane gas pipeline easement (the DEIS does not specify), as these properties are indeed already so encumbered, the impacts of an additional pipeline within or along the existing ROW will

CO50-122

See the response to comment CO5-10 (wetlands). See the response to comment FA6-10 regarding long-term monitoring of the pipeline right-of-way for invasive species. Section 3.4.3 of the EIS has been revised with new information regarding the Kernan Land Trust property and our assessment of potential impact avoidance, minimization, and mitigation measures.

# COMPANIES AND ORGANIZATIONS

## CO51 – Pennsylvania Sierra Club

### Comments of the Pennsylvania Sierra Club to the Federal Energy Regulatory Commission

April 7, 2014

- CO51-1 The Sierra Club was founded in 1892 to explore, enjoy, and protect our planet. The Sierra Club has about 24,000 Pennsylvania members. Nationally and locally, the Sierra Club has been a leader in conservation practices and environmental protection. The Sierra Club has members in Susquehanna County, Pennsylvania who will be affected by the proposed pipeline. Our Pennsylvania members breathe the air, drink the water, travel on the roads, and recreate in the region.
- The Pennsylvania Chapter of Sierra Club joins in the detailed comments filed by Earthjustice today on behalf of many organizations on the draft environmental impact statement. (Constitution Pipeline and Wright Interconnect Projects, Docket Nos. CP13-499-000; CP13-502-000; PF12-9)
- The Sierra Club is concerned by approach the Commission is taking toward gas development. The impacts caused by the construction and operation of the proposed projects are collectively significant and that the proposed mitigation measures are insufficient to render such impacts not significant.
- The Williams-Constitution pipeline will have extensive environmental impacts, which have not been thoroughly in an comprehensive environmental review.**
- Williams is proposing to construct a 124-mile pipeline, portions of which will cut through Susquehanna County in Pennsylvania. The construction of this project will disturb more than 1,862 acres of land and leaving at least 748 acres permanently altered. Project construction will result in the clear-cutting of hundreds of thousands of trees. The permanent conversion of forest to open land will fragment important habitat, will result in increased stormwater runoff, and will compromise the area's resilience to flooding in the face of increased precipitation and more frequent and intense storm events. Pennsylvania has experienced extensive stormwater damage from flooding in recent years.
- The project will cross multiple public drinking water supply sources, three watersheds, at least 91.8 acres of wetlands, and 277 water bodies, including designated high quality streams, trout streams, and at least 99 protected streams.
- CO51-2 Along with the miles of pipeline right of way and additional miles of access roads that will cut across forests and watersheds, the project will include two compressor units: one unit consisting of 15,300 hp of compression, filter separators, gas coolers, and other infrastructure, and a station consisting of 16,360 hp of compression, similar infrastructure, and a 300 kV emergency generator. All these activities degrade air quality. The project potentially will affect the habitat of threatened and endangered species, including the Indiana Bat, and special protection waters in Pennsylvania.
- CO51-3 This pipeline project has not been the subject of a thorough comprehensive review. The FERC approach – without comprehensive, in-depth analysis and long-term planning – encourages

CO51-1 The discussion of interior forest in section 4.5.3 of the EIS has been revised. See the response to comment CO41-16 regarding stormwater runoff and sediment and erosion controls. Section 4.1.3 of the EIS has been revised to provide additional information regarding flooding. Section 4.3 of the EIS discusses potential impacts on water resources from the proposed projects.

CO51-2 The proposed projects would consist of modifications to an existing compressor station. As stated in section 2.1 of the EIS, the proposed Wright Interconnect Project would include construction of a new transfer compressor station including the addition of incremental compression facilities of about 21,800 horsepower, to supplement the existing compression capacity of 14,200 horsepower.

Air quality impacts and proposed mitigation are discussed in section 4.11.1 of the EIS. See the response to comment SA5-2 and section 4.7 of the EIS regarding threatened and endangered species. Sensitive waterbodies are discussed in section 4.3.3 of the EIS.

CO51-3 Sensitive resources, as well as potential impacts and mitigation, are discussed in the EIS for interior forest and forest fragmentation (section 4.5.3), soil compaction (section 4.2.2), noise (section 4.11.2), aquifers and waterbodies (section 4.3.3), air quality (section 4.2.1), and wetlands (section 4.4 and appendix L). See the response to comment CO41-16 regarding stormwater runoff and sediment and erosion controls.

S-777



COMPANIES AND ORGANIZATIONS

CO51 – Pennsylvania Sierra Club (cont’d)

CO51-3  
cont'd

gas development while ignoring impacts on the Susquehanna River Basin as a whole. Among our concerns are the following impacts:

- Forest fragmentation
- Soil compaction
- Noise, structural damage, and aquifer contamination
- Air quality degradation
- Loss of wetlands and water quality degradation
- Stormwater runoff and flooding

CO51-4

These consequences have not been adequately addressed in the draft environmental impact statement. A faulty environmental analysis, based on incomplete disclosure, does not support a decision under NEPA or the conclusion that the projects serve the public interest.

Respectfully submitted,

Thomas Y. Au  
Conservation Chair  
Sierra Club, Pennsylvania Chapter  
PO Box 606  
Harrisburg, PA 17108

CO51-4

The commentor’s statements regarding the draft EIS are noted. See the response to comment FA1-1.

# COMPANIES AND ORGANIZATIONS

## CO52 – Concerned Citizens of Trout Creek

20140407-0093 FERC PDF (Unofficial) 04/07/2014

Howard Hannum  
1221 Higley Rd  
Sidney Center, NY 13839

3/3/2014

Kimberly D. Bose, Secretary  
The FERC  
888 First Street NE, Room 1A  
Washington, D.C. 20426

US Army Corps of Engineers  
New York District, CENAN-OP-R  
Upstate Regulatory Field Office  
1 Buffington Street, Bldg. 10, 3rd Floor  
Watervliet, New York 12189-4000

FILED  
SECRETARY OF THE  
COMMISSION  
2014 APR -7 P 1:38  
FEDERAL ENERGY  
REGULATORY COMMISSION

Re: Docket Nos. CP13-499 and CP13-502; NAN-2012-00449-UBR

CO52-1 Constitution Pipeline Project Federal Energy Regulatory Commission (FERC) Dear FERC: I write today representing the Concerned Citizens of Trout Creek, NY (CCTC), a group located just off the main corridor of the pipeline route between Sidney Center, NY and Franklin, NY in Delaware County. I have been granted intervenor status under this heading. In regard to your issuance of the Draft E.I.S. for the Cabot/Williams Partners project known as the Constitution Pipeline, I am writing to request delaying the release of this document. While I agree with your assessment that there is a "real" need for a slope stability analysis for the area in and around mile post 30.3, I would request the same consideration for the entire region between Windsor, NY and Sidney, NY as well as the area between Unadilla, NY and Franklin, NY. These areas are very hilly and very rocky and this project will be laid on some very steep slopes in both of these regions. Masonville, NY is home to two quarries in the region and it is quite hilly around the area where the pipeline is targeted. A full slope stability analysis done by a qualified neutral party would be nothing short of satisfactory, and would be expected for a Federal Project of this nature. Furthermore, ample time to review the results of those analyses would also be requested at this time. You also mention in your report that you issued a request for a full Geo Technical Test, and yet we see nothing of this test or its results and we would need ample time to review the results of those tests as well. We would sit down with qualified personnel to review the geo tech. tests. You have mentioned that the Williams/Cabot and Iroquois Spill Plans are on stand-by to be implemented during construction and operation. We here at the CCTC would like to see and review the spill plans for both of these companies and we would like time to review the plans with qualified NY State licensed personnel as well as an EMS representative from the following local Fire departments: Sidney, Deposit, Afton, Masonville, Sidney Center, Trout Creek, Franklin, Walton, East Meredith, Samford and Windsor. We do not think it is prudent to issue a Draft EIS document of this magnitude and nature at this time. There are too many important tests missing and not submitted and the results of those tests need to be reviewed by qualified NY State licensed personnel. Thank you- Howard Hannum Concerned Citizens of Trout Creek 1221 Higley Rd Sidney Center, NY 13839

CO52-2

Sincerely,

Howard L Hannum

CO52-1 The commentor's requests for delayed issuance of the draft EIS are noted. See the response to comment FA1-1. As stated in section 4.1.3.4 of the EIS, a geotechnical consulting firm provided an analysis of steep slopes and karst areas that would be crossed by the proposed route. A well-defined landslide feature at MP 30.3 was identified. Constitution stated it would perform a slope stability analysis at this location. We included a recommendation for this study since it had not been filed at the time the draft EIS was published. Constitution filed an update on June 3, 2014 for a reroute extending from MP 30.16 to MP 30.53 designed to avoid the landslide area. The geotechnical firm did not identify any other areas of the proposed route which would require a formal slope stability analysis.

CO52-2 As stated in section 4.1.1.2 of the EIS, prior to construction Constitution should file geotechnical studies for all trenchless crossing locations. Any information requested to be provided prior to construction would be filed on our e-Library system and would be available to the public. Constitution's Spill Plan for Oil and Hazardous Materials and Iroquois' Spill Prevention, Control and Countermeasure Plan are also on e-Library, and their current versions have been available for public review since November 11, 2013 (Constitution) and June 13, 2013 (Iroquois). See the response to comment FA1-1 regarding outstanding studies. .

S-779

COMPANIES AND ORGANIZATIONS

CO53 – James Bacon for CWCWC

20140408-5084 FERC PDF (Unofficial) 4/8/2014 11:40:14 AM

JAMES BRYAN BACON, ESQ., P.C.  
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April 7, 2014

Kimberly D. Bose, Secretary  
Nathaniel J. Davis, Sr., Deputy Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, DC 20426

*Re: Comments on Constitution Pipeline DEIS  
Application Docket No. CP13-499*

Dear Ms. Bose,

Thank you for the opportunity to submit comments on the Draft Environmental Impact Statement (DEIS) for the above application to obtain a Certificate of Public Convenience and Necessity from the Federal Energy Regulatory Commission (FERC).

CWCWC is a registered intervenor in the above application. As indicated in CWCWC's petition to intervene, it is not-for-profit corporation which includes 50 affiliated groups representing over 120,000 individuals. Over the last fifteen years, CWCWC has worked to protect and improve New York's surface and groundwater supplies through education and advocacy.<sup>1</sup>

The Constitution Pipeline is jointly proposed by four companies, Williams, Cabot Oil & Gas, Piedmont Natural Gas and WGL Holdings ("Applicant"). The latest figures for net annual income for these companies is 7.5 billion, 279 million, 134 million and 119 million, respectively. (Company Annual Reports).

WGL will bear the initial cost of the pipeline which it estimates to be \$68 million. (2013 Annual Report). The 124-mile 30-inch pipeline is proposed to transport natural gas supplies from a small area of northern Pennsylvania to Schoharie County, N.Y. from where it would be sent to northeastern markets.

<sup>1</sup> CWCWC's mission statement states: "[t]he Coalition strives to protect and improve the waters of NYC's Croton Watershed as well as all New York State watersheds. We are an alliance of individuals and groups who believe that safe, clean and affordable drinking water is a basic human right."

CO53-1 See the responses to the Earthjustice letter referenced by the commentor at comments CO41-2 and CO41-3. See the response to comment LA7-5 regarding public need.

S-780

# COMPANIES AND ORGANIZATIONS

## CO53 – James Bacon for CWCWC (cont'd)

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CO53-1  
cont'd

### POINT I

#### THE DEIS FAILS TO DEMONSTRATE THAT THE APPLICANT IS ENTITLED TO A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

In determining whether to grant the certificate of public necessity, FERC's official policy in the siting of gas pipelines requires it to "appropriately consider... the unneeded exercise of eminent domain" and "take these landowners concerns into account, and to mitigate adverse impacts where possible and feasible." (FERC Statement of Policy issued September 15, 1999, Dkt. No. PL99-3-000 Natural Gas Pipeline Facilities).

Moreover, "[t]he more interests adversely affected or the more adverse impact a project would have on a particular interest, the greater the showing of public benefits from the project required to balance the adverse impact." Even the "modest use of federal eminent domain authority" would need to be justified by "[a] showing of significant public benefit." The policy directs FERC to "to act with caution to avoid unnecessary rights-of-way."

Here, the public necessity requirement cannot be met.

According to Earthjustice<sup>2</sup> the pipeline will cut through more than 1,862 acres of land in Broome, Chenango, Delaware, and Schoharie Counties in New York and Susquehanna County in Pennsylvania. Only nine percent of the proposed 124-mile route utilizes existing rights-of-way, with the remainder decimating hundreds of thousands of trees in over 1,000 acres of forest land. This permanent conversion of forest to open land will fragment important habitat, result in increased storm-water runoff, and make the area more prone to flooding. In addition, the pipeline will cross multiple public drinking water supply sources, three watersheds, at least 91.8 acres of wetlands, and 277 waterbodies, including high quality streams, trout streams, and at least 99 protected streams.

In addition, the project includes two compressor stations, posing a threat to air quality and public health. These sources will emit harmful air pollution, including climate-change-causing greenhouse gases. Moreover, there is the potential to impact and potentially contaminate multiple public drinking water sources and an untold number of private drinking water wells that lie within the project area.

<sup>2</sup> <http://earthjustice.org/news/press/2014/environmental-groups-question-unexamined-impacts-in-federal-evaluation-of-constitution-pipeline-project>.

# COMPANIES AND ORGANIZATIONS

## CO53 – James Bacon for CWCWC (cont'd)

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CO53-1  
cont'd

Indeed, in New York, the 100-mile segment will require a construction corridor 85-125 feet in width. That equates to between 45 and 66 million square feet of land disturbance and the forced taking of property from dozens of homeowners.

Review of the Applicant's annual reports show that the purpose of the Constitution Pipeline is to accommodate shippers' needs in Pennsylvania to transport gas to the northern states from a very small area in northern Pennsylvania measuring 15 miles long by 8 miles wide. (See DEIS Map Figure 3.4.2-1).

Consequently, rather than public necessity, the pipeline is simply an convenient method of gas transport allowing the industry to maximize short gain revenues at the permanent expense of land owners in New York spanning a hundred mile corridor.

CO53-2

Comments on the DEIS already complain that many homeowners have been bullied by the Applicant in attempting to force homeowners to sign leases. The Applicant presents a Hobson's choice of leasing now or facing eminent domain proceedings where the result is a foregone conclusion.

CO53-3

As above, the Applicant must show a "significant public benefit" to justify significant (and irreversible) impacts to the environment and the industry's use of eminent domain proceedings against the rights of every owner inconvenienced by the 124-mile pipeline.

CO53-4

DEIS comments from homeowners, small business owners and farmers show the pipeline will cause irrevocable damage on an unprecedented scale. Farms relying on a maple sugaring will suffer from the permanent loss of mature trees which cannot be replaced. Homeowners who have spent years and in some cases, decades farming and improving their lands will suffer an irreversible change in their quality of life along the 124-mile corridor. Homeowners will never recoup the damages to their property values. The pipeline will also damage homeowners' abilities to sell or refinance their lands and will be a permanent cloud on the title of those properties.

CO53-5

Gregory May, a Senior Vice President for Residential Mortgage Lending with Tompkins Trust Company authored a "White Paper" in 2011 setting forth a number of basic conflicts caused by using residential properties for industrial uses such as a gas pipeline.

Among Mr. May's major points were that:

CO53-2

See the response to comment FA8-3.

CO53-3

See the responses to comments LA7-5 regarding public need and comment FA8-3 regarding eminent domain.

CO53-4

In section 4.8.4.2 of the EIS, we have included a recommendation that Constitution file an impact avoidance, minimization, or mitigation plan for specialty crops (such as the sugar bush operation at MP 79.5), in coordination with the landowner if possible. Section 4.9.5 has been updated with new information concerning property values.

CO53-5

Section 4.9.5 has been updated with new information concerning property values and mortgages. Issues related to insurance are discussed in section 4.9.6 of the EIS. We have included recommendations in section 4.9 of the EIS regarding the documentation of issues related to insurance and mortgages in relation to the Constitution pipeline. We note that there are likely differences for these issues between the installation of a natural gas pipeline and well drilling and production.

# COMPANIES AND ORGANIZATIONS

## CO53 – James Bacon for CWCWC (cont'd)

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CO53-5  
cont'd

- Surface or sub surface [oil or gas] rights within 200 feet of a residential structure would not be acceptable for conventional financing in the Secondary market.
- NYS title insurance gas endorsements specifically void title insurance coverage if the premises are used for any commercial venture.
- Lenders are responsible to warrant several items to the investor in the Secondary market that can not be done leaving lenders with significant liability.
- Surface or sub surface [oil or gas] rights within 300 feet of a residential structure or within 300 feet of property boundary lines would not be acceptable for FHA (Department of HUD) financing.<sup>3</sup> Id.

Also in 2011, the New York State Bar Association Journal<sup>4</sup> examined the issue of oil and gas lease impacts upon homeowner's property interests. The article quoted Mr. May in stating:

Even before the drilling commences, many upstate New York homeowners with gas leases cannot obtain mortgages. Bank of America, Wells Fargo, Provident Funding, GMAC, FNCB, Fidelity and First Liberty, First Place Bank, Solvay Bank, Tompkins Trust Company, CFCU Community Credit Union and others are either imposing large buffer zones (too large for many borrowers) around the home as a condition to the loan or not granting a mortgage at all.

Mr. May's reports have been submitted during hearings before the New York State Assembly and the State Senate.

May's 2014 report concludes that a gas lease – or worse an eminent domain proceeding allowing a gas pipeline - is in direct conflict with most financing options:

These conflicts with commonly accepted lending standards would appear to prohibit any residential property with a gas lease or drilling activity from securing traditional mortgage financing.

The report reiterates financing prohibitions on "surface or sub-surface entry within 200 feet of the residential structure." (Freddie Mac requirements in section 39.4[i].) Id. at pg. 2.

<sup>3</sup> Available at: [www.tompkins-co.org](http://www.tompkins-co.org).

<sup>4</sup> "Homeowners and Gas Drilling: Boon or Bust? Elisabeth N. Radow, Esq. (November/December 2011).

# COMPANIES AND ORGANIZATIONS

## CO53 – James Bacon for CWCWC (cont'd)

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CO53-5  
cont'd

Further, the report indicates the standard NYS mortgage document (Fannie Mae/Freddie Mac form 3033) "adopted by virtually all lenders in New York" prohibits storage or disposal of hazardous substances on residential property such as would be conveyed by the pipeline. (Section #21 of the standard NYS mortgage document.) Id. at pg. 3.

Also, the 2014 report identifies that homeowner's insurance policies prohibit gas leases. It identifies that large nationwide insurance companies such as Nationwide and State Farm have clearly stated they do not provide coverage for any losses associated with gas leasing. Id. at pg. 4.

CO53-6

Additionally, 8 x 15 mile supply area in Pennsylvania is finite. Once the gas resources are depleted the purpose of the pipeline will have been fulfilled but will leave behind a legacy of the destruction of millions of square feet of forests, wetlands and undisturbed lands.

Therefore, the Applicant cannot demonstrate that the extraction of a limited amount of natural gas from a discrete area justifies the impacts upon the public and environment.

CO53-7

The pipeline also forestalls New York goal of shifting 30 percent of the electrical grid to renewables by the end of 2015. Natural gas expansion puts that goal out of reach, and deflects spending on alternative energy sources,

CO53-8

On another point, the Applicant has failed to justify the taking of landowners' properties along the preferred pipeline route.

The Interstate Route 88 corridor provides the least number of eminent domain proceedings, if Alternative M is reconfigured. Much of the interstate has a wide median of 100 feet and pipeline can be built within that span though it may cost more. (See attachment "Temporary Right of Way Width Requirements for Pipeline Construction).

While, NYSDOT stated that the proposed pipeline would be required to comply with FHWA policy, (23 CFR 645, Subpart B) the Applicant has the means to meet all such requirements.

As above, the Applicant's combined net annual income is in the order of eight (8) billion dollars and thus the Applicant has the means to absorb the cost of realigning the pipeline route and utilizing advanced technology to minimize the width needed to install the pipeline in the highway median.

CO53-6

See the response to comment LA9-4 regarding natural gas reserves.

CO53-7

Section 3.1.2.3 of the EIS discusses renewable energy.

CO53-8

See the response to comment SA4-2 regarding Alternative M.

# COMPANIES AND ORGANIZATIONS

## CO53 – James Bacon for CWCWC (cont'd)

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CO53-9

Finally, it is important to note the recent decision of *Kentuckians United to Restrain Eminent Domain, Inc. v. Bluegrass Pipeline, Inc.* Franklin County, Civil Case No. 13-CI-1402 involving the Bluegrass Pipeline proposed by the Applicant Williams herein bearing striking similarities to the Constitution Pipeline. Bluegrass is 150 miles in length with a 24-inch diameter running through Kentucky, carrying natural gas liquids from Pennsylvania to the Gulf Coast.

The court ruled that a private corporation would need an “undeniably clear mandate from the legislature” before being able to seize citizen's property rights and “[t]here has been no such clear and explicit delegation of this power to Bluegrass.” The court further held “Bluegrass is a private, for-profit unregulated entity . . . not acting ‘in public service,’ and therefore, it falls outside the scope of KRS Chapter 278.”

Similarly, in New York “[e]xercise of the eminent domain power cannot be for the sole benefit of a private party.” *West 41st Street Realty LLC v New York State Urban Development Corp.* 298 AD2d 1 (1st Dept 2002) *appeal dismissed* 98 NY2d 727, (2002), *certiorari denied* 537 US 1191 (2003). (See also *Northville Dock Pipe Line Corp. v. Fanning*, 21 NY2d 616, [1968] ruling “a public corporation possessing condemnation powers must establish that it is in fact performing a public use or public benefit before it can proceed with a condemnation.”)

For all of the above reasons, FERC must deny the application as the Applicant cannot meet the federal requirements to obtain a Certificate of Public Convenience and Necessity.

Respectfully,



James Bacon

Attorney for CWCWC

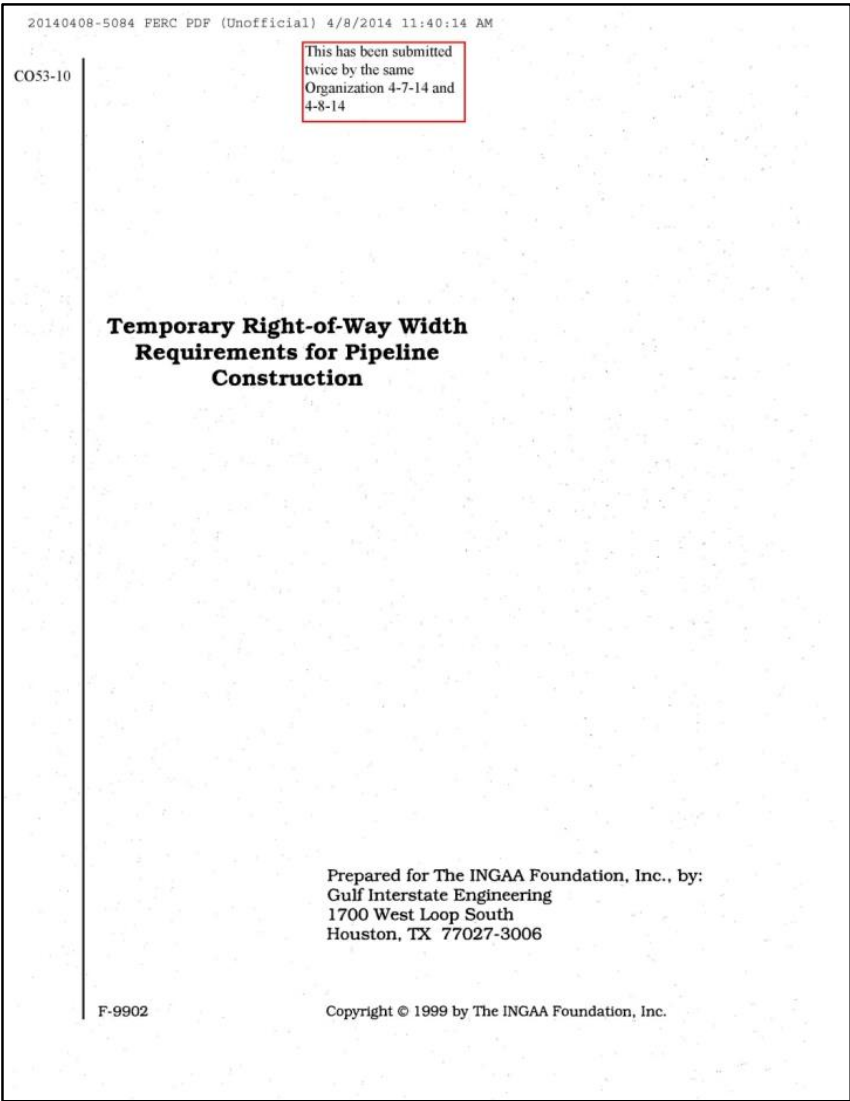
CO53-9

See the response to comment LA7-5 regarding public need. If the pipeline project is certificated by the Commission, that authorization conveys with it the right of eminent domain, which may be used for obtaining access for conducting surveys. Pipelines that are not under FERC jurisdiction (as cited in the comment) may face different reality regarding eminent domain authority (e.g., state regulations or the Natural Gas Act).



# COMPANIES AND ORGANIZATIONS

CO53 – James Bacon for CWCWC (cont'd)



CO53-10

The information provided in the attached technical report from the Interstate Natural Gas Association of America is noted. Constitution’s proposed construction workspaces follows many of the guidelines and recommendations in this report.

COMPANIES AND ORGANIZATIONS

CO53 – James Bacon for CWCWC (cont'd)

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CO53-10  
cont'd

INGAA FOUNDATION

Temporary Right-of-Way Width Requirements  
For  
Pipeline Construction

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COMPANIES AND ORGANIZATIONS

CO53 – James Bacon for CWCWC (cont’d)

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# COMPANIES AND ORGANIZATIONS

## CO53 – James Bacon for CWCWC (cont'd)

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INGAA Foundation

Executive Summary

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cont'd

### Executive Summary

The INGAA Foundation commissioned Gulf Interstate Engineering (GIE), a professional engineering firm, to undertake a study and make an objective determination of appropriate widths for safe, maneuverable pipeline construction rights-of-way. To ensure the objectivity of the study, GIE examined current practices and safety codes, surveyed pipelines and industry contractors, and analyzed the right-of-way widths needed for a typical interstate pipeline construction spread for a range of pipe diameters. GIE's analysis evaluated the storage space requirements for excavated soil, size of construction equipment, pipeline materials, and the varied operations of the workforce.

GIE found that the diameter of the pipe determines the baseline width for a safe and maneuverable construction right-of-way. Four baseline construction right-of-way widths should be permitted, based on pipe diameter.


Pipe Diameter (Inches)	Right-of-Way Widths (Feet)
8 to 16 <sup>1</sup>	80
18 to 24	95
30 to 36	110
40 to 42	125

GIE believes that these baseline widths should be adopted, with increases or decreases for special conditions. Consideration should be given to the effects of different soils, terrain, construction techniques, and other factors that could play a role in selecting the widths needed to safely construct pipelines.

Use of these baselines will not alter FERC's existing procedures for increasing or decreasing construction workspace at specific locations for special conditions (e.g., wetlands, side hill cuts, stream crossings, etc.). The study recognizes that widths may need to be narrowed in sensitive environmental areas, sites with cultural or historic significance, and densely populated areas.

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<sup>1</sup> This baseline width would also be appropriate for pipeline less than 8 inches in diameter.



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Right-of-Way Study

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# COMPANIES AND ORGANIZATIONS

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INGAA Foundation

Introduction

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### 1.0

#### Introduction

This study analyzes the basic right-of-way width requirements for the construction of cross-country natural gas pipeline projects in the United States and offers recommendations for right-of-way widths.

##### 1.1 Goals and Objectives

The goal of this study is to analyze and recommend the right-of-way widths needed to construct natural gas pipelines. It is intended to inform the various parties concerned with pipeline projects, such as sponsoring companies, pipeline construction contractors, engineering firms, regulatory agencies, environmental interests, and landowners.

This study analyzes three major issues related to construction rights-of-way: (1) required space for safe operation of equipment and worker safety, (2) environmental impacts due to appropriate right-of-way width, and (3) placement of excavated soil.

Specific objectives are to:

- (1) Identify and discuss variables that affect typical construction widths, such as pipe diameter, width of ditch, depth of pipe burial, treatment of topsoil, grade, terrain, equipment use, etc., and determine recommended construction right-of-way widths.
- (2) Discuss federal safety requirements for pipeline construction.
- (3) Assess the impact on the environment of potential increases in right-of-way widths.
- (4) Solicit experience from members of the pipeline industry about right-of-way width requirements. Information was requested from: (1) Natural Gas Transmission Companies, (2) Pipeline Contractors, (3) Environmental Service Firms, and (4) Safety Specialists.


# COMPANIES AND ORGANIZATIONS

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INGAA Foundation

Introduction

### 1.2 Background

The U.S. natural gas pipeline industry faces a significant challenge in obtaining sufficient width on the pipeline right-of-way to safely build new cross-country pipeline projects. FERC, which approves federal applications for natural gas pipeline projects, has the difficult task of selecting pipeline projects that will maintain an adequate supply of natural gas in a growing marketplace. At the same time, the commission must minimize the impact of pipeline construction on the local environment and on adjacent landowners.

The Federal Energy Regulatory Commission publication *Upland Erosion Control, Revegetation, and Maintenance Plan* applies to all non-wetland natural gas construction projects. The FERC staff encourages its use for all construction activities. It says:


The construction right-of-way width shall not exceed that described in the project sponsor's FERC application unless otherwise modified by a certificate condition. However, additional construction right-of-way may be used (subject to compliance with all applicable survey and mitigation requirements) in limited areas for full right-of-way width topsoil segregation or where topographic conditions, such as side-slopes, require it to ensure safe construction. In no case shall the construction right-of-way width exceed 100 feet without the prior written approval of the Director of OPR.

Pipelines are concerned that the baseline construction right-of-way for a medium diameter pipeline may come to be 75 feet, with a limited number of variances up to 100 feet.<sup>2</sup>

Although the narrower baseline is sometimes thought to reduce environmental impacts of pipeline construction, that is not always, or even usually the case in the absence of sensitive environmental areas, cultural, or historic sites and/or densely populated areas. A wider baseline construction right-of-way is consistent with environmental and safety goals and will expedite the certificate process by minimizing the time requirement of sponsors and FERC staff in preparing and evaluating variances.

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<sup>2</sup> U.S. Federal Energy Regulatory Commission, 85 FERC 61, 432, *Order On Rehearing And Issuing Certificate*, CNG Transmission Corporation and Texas Eastern Transmission Corporation, Docket No. CP97-774-001, Washington, D.C., December 23, 1998. *See Also* U.S. Federal Energy Regulatory Commission, 84 FERC 61,345, *Revision of Existing Regulations Under Part 157 and Related Sections of the commission's Regulations Under the Natural Gas Act, Notice of Proposed Rulemaking*, Docket No. RM98-9-000, Washington, D.C., September 30, 1998.



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# COMPANIES AND ORGANIZATIONS

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### 1.3 Technical Approach to the Study

GIE used its professional experience in the pipeline industry to analyze and calculate the different dimensional components that make up the width requirements of a recommended construction right-of-way. GIE calls this method the *Engineering Approach*.

Information was also obtained from three interested groups in the pipeline industry: (1) Natural Gas Transmission Companies, (2) Pipeline Contractors, and (3) Environmental Service Companies. The subjects covered were width requirements, safety, and environmental aspects of pipeline construction.

The Engineering Approach was compared to the width requirements as described by pipeline contractors (*Contractors' Requirements*). A comparison of the two views is given in Section 2.4 and shows that the contractors' practical experience is consistent with good engineering judgement.

Section 2 of the study provides recommended construction right-of-way widths while Section 3 identifies variables that could modify (increase or decrease) the right-of-way width requirements.

Worker safety issues within the construction right-of-way are discussed in Section 4 and the potential environmental impact of construction right-of-way width is analyzed in Section 5.

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Individual Comments



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Introduction

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### 1.4 Limitations of the Study

This study analyzes the basic right-of-way width requirements for cross-country conventional-type pipeline construction using criteria for a typical pipeline spread. Analysis of construction right-of-way widths or extra workspace for the following conditions is not included in this study.

- (1) Road crossings
- (2) Railroad crossings
- (3) River and stream crossings
- (4) Pipe burial depth in excess of 36 inches
- (5) Hard rock excavation
- (6) Topsoil excavation beyond the ditch and spoil pile areas
- (7) Timber storage on the right-of-way
- (8) Steep side-slope terrain
- (9) Mountains
- (10) Major wetland crossings
- (11) Marsh construction
- (12) Unstable or contaminated soils
- (13) Environmentally sensitive areas
- (14) Co-location within existing utility corridors
- (15) Residential or industrial areas
- (16) Pipeline maintenance
- (17) Off-sets from existing pipelines
- (18) Special environmental or regulatory restrictions
- (19) Clearance near structures and utility facilities
- (20) Landowner depth requirements
- (21) Landowner special topsoil segregation requirements
- (22) Groundwater table levels
- (23) Frequency of field drainage tile

# COMPANIES AND ORGANIZATIONS

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Recommended Width

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### 2.0

#### Recommended Construction Right-of-Way Width

This section analyzes the basic right-of-way width requirements for conventional cross-country pipeline construction and recommends the use of a series of standard baseline right-of-way widths. Section 2.1 sets out the steps to determine right-of-way width; Section 2.2 establishes a baseline for a typical pipeline construction spread; Section 2.3 uses the Engineering Approach to analyze each component of a typical right-of-way cross-section; Section 2.4 lists the average width requirements needed by contractors; and Section 2.5 compares the Engineering Approach with the Contractors' Requirements.

##### 2.1 Determination of Construction Right-of-Way Width

Decisions about the width of temporary right-of-way for pipeline construction are made at three distinct phases of the Pipeline Construction Project.

The initial decisions about the needed width are made during preliminary project planning when a general route is determined. General conditions are examined and default construction practices are considered.

The second, more refined determination, is made at the time of final routing and bidding of the construction job. Areas of special concern may be identified and widths may need to be adjusted.

The third determination occurs at the time of construction when acute weather and site conditions vary from the planned construction conditions.

**The purpose of this report is to define the baseline right-of-way width that can be used for preliminary project planning and identify the localized variables that modify these recommendations.**

##### 2.2 A Typical Pipeline Construction Spread

The terms *typical pipeline construction spread* and *typical width requirement* can be misleading because width requirements vary from location to location for any given pipe size and


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Recommended Width

construction condition. Consequently, this study establishes a baseline definition for what constitutes typical so a frame of reference can be used for discussion.

A typical pipeline construction spread is a unit of equipment and personnel required to construct a pipeline. The modern-day pipeline construction spread is, in essence, a moving assembly line that may consist of 18 separate operations, up to 100 pieces of heavy construction equipment, and hundreds of skilled craftsmen working in unison. These individual operations, each performed by a specially trained crew, usually proceed in a definite sequence as shown in Figure 1. These operations are:

(1) Clearing and grading	(10) X-ray inspection of welds
(2) River crossings (not included in the study)	(11) Joint coating
(3) Ditching	(12) Field coating inspection
(4) Stringing pipe	(13) Bottom padding
(5) Pipe bending	(14) Lowering-in
(6) Pipe set-up	(15) Top padding
(7) Pipe end preparation	(16) Backfilling
(8) Pipe alignment	(17) Pressure testing
(9) Pipe welding	(18) Revegetation and Cleanup



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Right-of-Way Study

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# COMPANIES AND ORGANIZATIONS

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Recommended Width

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Although a typical pipeline project may not exist, representative criteria, commonly seen on a pipeline construction spread, are defined as follows:

### **Baseline Construction Right-of-Way Assumptions for Illustrative Purposes**

#### **(1) General**

- Cross-country pipeline
- Twenty-five mile pipeline
- Upland construction methods
- Pipe cover is 36 inches
- Access to the right-of-way is from an adequate number of secondary roads.
- Weather – temperate with normal rain

#### **(2) Pipe**

- Double random lengths – factory coated
- Stick rod welding

#### **(3) Terrain**

- Undulating – Approximately 20 percent bending

#### **(4) Land Use**



- Timber – 22 percent (3<sup>rd</sup> growth, 1 to 35 years, hardwood and pine mixed).  
Timber is salvageable by logging on right-of-way and hauling to local mills.  
Undergrowth is chipped on the right-of-way.
- Cultivated land – 35 percent
- Pasture – 38 percent
- Wetlands – 5 percent

#### **(5) Soil**

- Cohesive soil (clay, fine grained or high clay content – OSHA Type B)
- Soft Rock – 5 percent (diggable - rippable)
- Topsoil segregation is 12 inches deep only over ditch and spoil pile areas.
- Flat right-of-way (no side slope) with a 30 percent "swell" factor on excavated soil.

# COMPANIES AND ORGANIZATIONS

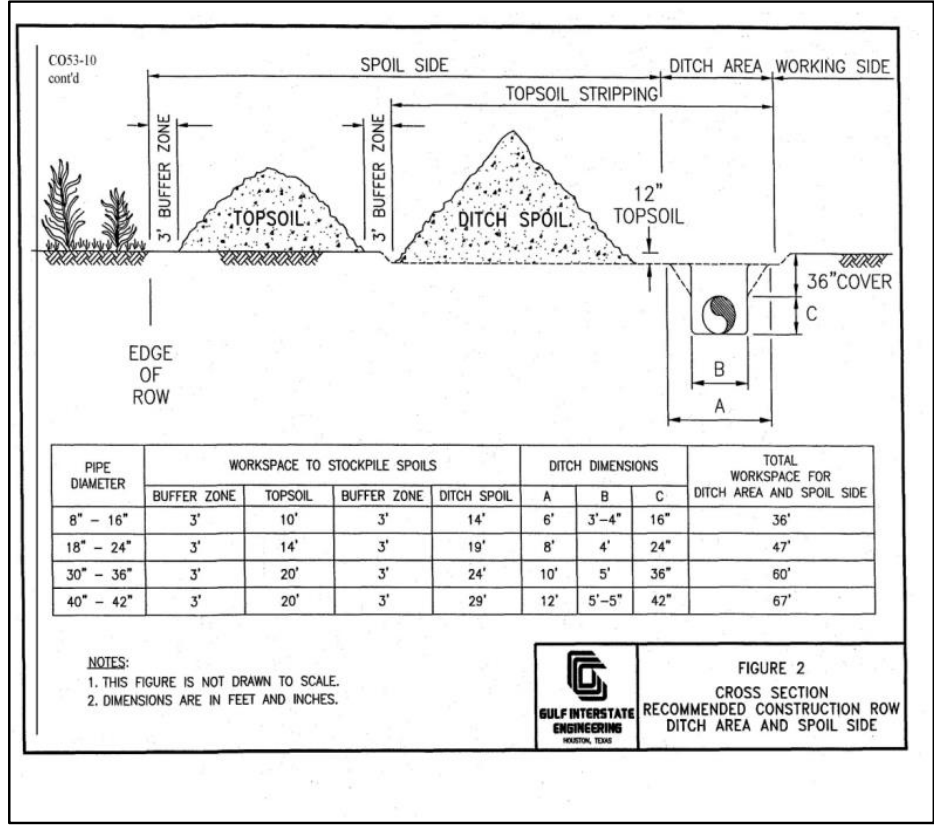
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	<div><b>2.3 Right-of-Way Width Requirements—Engineering Approach</b></div> <div><p>The analysis of width requirements is based on what GIE calls the <i>Engineering Approach</i>, that is, the identification and discussion of each component that makes up the cross-sectional dimensions of the right-of-way width. This approach consists of the analysis of each component of the construction right-of-way width from an objective viewpoint. Each dimension given in this approach is based on GIE's past experiences and professional opinion.</p></div> <div><p>The analysis divides the construction right-of-way width into three major components: (1) Ditch Area, (2) Spoil Side, and (3) Working Side. The ditch area is for placement of the pipe; the spoil side is for the temporary stockpiling of excavated subsoil during construction; and the working side is for the construction equipment and crew.</p></div> <div><p>As a result of using the Engineering Approach to analyze construction right-of-way widths, GIE has divided right-of-way requirements into four standard default widths based on pipe diameter groups. See Figures 4 to 7 for the four default widths.</p></div> <div><b>(1) <u>Ditch Area</u></b></div> <div><p><b>Pipe ditch</b>—Figure 2 shows a cross-section of the recommended ditch dimensions. The areas required for the pipe ditch are tabulated in the accompanying table. The pipe diameters, ranging from 8 to 42 inches, are divided into four groups based on the size of equipment required to construct the pipeline. In other words, a particular size bucket is used to excavate the ditch for 8 inch through 16 inch pipe, and a different size of bucket is used to excavate the ditch for 18 inch through 24 inch pipe, and so on. The ditch dimensions within each group of pipe sizes (8 inch to 16 inch, 18 inch to 24 inch, etc.) remain the same regardless of the respective pipe diameter.</p></div> <div>10</div> <div> GULF INTERSTATE ENGINEERING</div> <div>Right-of-Way Study</div>

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# COMPANIES AND ORGANIZATIONS

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The dimensional requirements of the pipe ditch are directly related to each pipe size and soil conditions, but also are strongly influenced by the terrain and weather. Although pipe diameter is the major factor in determining ditch dimensions, the soil type, which can vary from one location to the next on a single pipeline system, will influence the equipment requirements and the resulting ditch dimensions. Also, the type of equipment used, such as wheel-type ditcher or backhoe, can result in a different ditch configuration.

Ditch area requirements are site specific and can not be assumed to remain constant from one location to another. The area to be ditched should be determined based on OSHA requirements, construction equipment, construction techniques, soil, and the weather conditions likely to be encountered during construction. These factors contribute significantly to variability of right-of-way width.

**Ditch calculations** – The calculations of ditch area for each pipe diameter group is based on the following conditions:

- The calculation of ditch area uses the largest size pipe in each category.
- The method of excavation is by conventional wheel or boom-type ditcher.
- The dimensions of the pipe ditch are uniform throughout the length of the pipeline.
- The top part of the ditch wall can be sloped back, if necessary, for ditch access.
- The soil is stable and the spoil is considered stackable.
- The clearance between the pipe and the ditch wall is a 12 inch minimum.
- The soil cover over the pipe is 36 inches.

All of the dimensions given in Figure 2 are carried forward to Figures 4 to 7 which show an overall view of the recommended right-of-way widths.

### (2) Spoil Side

Spoil is the term used for excavated soil. Figure 2 shows a cross-sectional view of the spoil side of the right-of-way width. The spoil side area, for stockpiling topsoil and ditch spoil, is directly proportional to the quantity of soil materials to be stored and the soil consistency (wet, dry, or sandy).

**Topsoil**—Before ditching begins, topsoil is removed and stockpiled near the outer edge of the right-of-way. Topsoil removal is normally site specific and may vary in width from only the ditch line to the entire width of the right-of-way, and from a few inches in depth to more than one foot. This study considers the removal of 12 inches of topsoil from the ditch line and ditch

# COMPANIES AND ORGANIZATIONS

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Recommended Width

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spoil area. Depending on the pipe size, the amount of topsoil stripped will require from 10 to 20 feet for stockpiling.

**Ditch spoil**—After topsoil removal, the ditch is excavated to the necessary depth for each pipe size and the ditch spoil is stockpiled no closer than two feet to the ditchline, where it is segregated from the topsoil by a three foot buffer zone. Depending on the pipe size, the ditch spoil will require from 14 to 29 feet for stockpiling.

**Buffer zones**—A three-foot buffer zone is allowed between the edge of the right-of-way and the topsoil, and between the topsoil and ditch spoil. This buffer zone allows for sloughing of soil and avoids mixing of the soil during stockpiling and backfilling operations. Buffer zones increase the right-of-way width requirements.

**Backfilling**—After the pipeline is lowered into the ditch, the ditch spoil is then placed back in the ditch over the pipeline and the topsoil returned to its original location.

**Spoil side width**—All of the dimensions given in Figure 2 are carried forward to Figures 4 to 7 which show an overall view of the recommended construction right-of-way widths that include the spoil side width.

### (3) Working Side

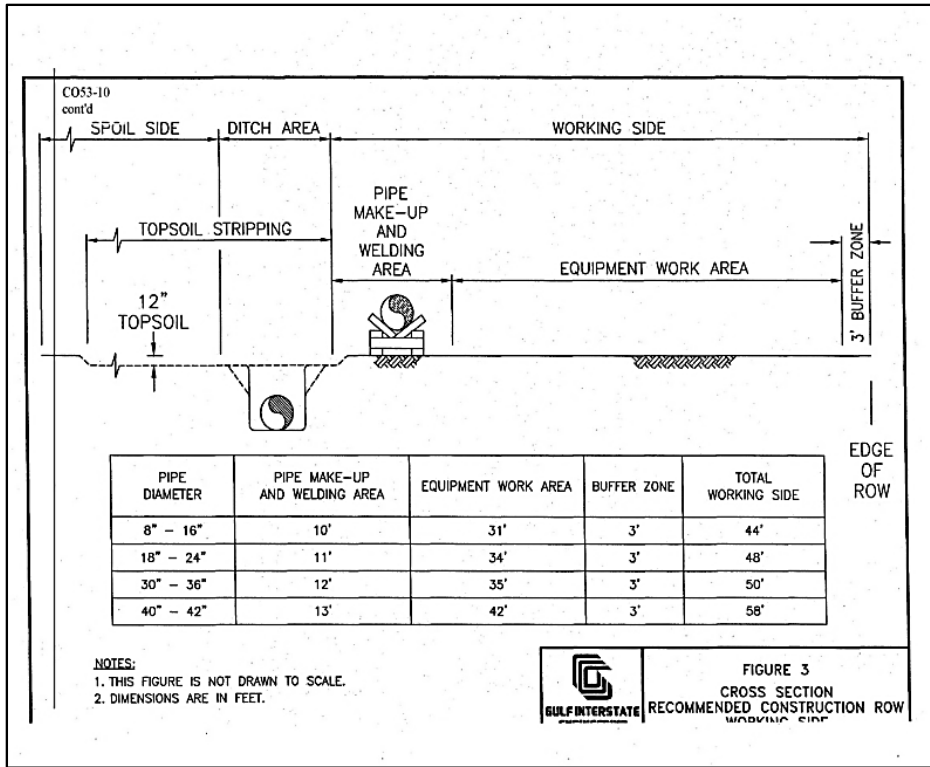
Figure 3 shows the cross-sectional view of the working side of the right-of-way width. This side consists of two separate areas: (1) pipe make-up and welding of the pipe, and (2) access and movement of construction equipment, personnel crews, and materials.

**Area for pipe make-up and welding** – The area for pipe make-up and welding is parallel and adjacent to the pipe ditch. This area is for pipe laydown, pipe alignment for welding, and the welding operations. The space requirements include a buffer zone between the ditch and the pipe, space for the pipe itself, and operational space for several welders and their equipment. Depending on the range of pipe diameters under consideration, this area will have a width of 10 to 13 feet.



COMPANIES AND ORGANIZATIONS

CO53 – James Bacon for CWCWC (cont'd)




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# COMPANIES AND ORGANIZATIONS

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**Equipment work area**—The area for equipment and crews is parallel and adjacent to the pipe make-up and welding area. While this area is primarily for construction equipment, working crews, supervision, and inspection, it also provides access for safety and environmental monitoring. Most important, this is the designated route for emergency equipment in the event of an accident during construction.

Depending on the range of pipe diameters under consideration, this area will have a width of 31 to 42 feet that includes a 5 foot separation zone for passing and maneuvering of equipment.


The side to side dimensions given in Figures 4 to 7 for each sideboom (or pipe layer) are different because bigger equipment is required to construct larger size pipelines. All of the dimensions given in Figure 3 are carried forward to Figures 4 to 7 which show an overall view of the recommended construction right-of-way widths.

**2.4 Right-of-Way Width Requirements-  
Contractors' Requirements**

GIE queried contractors about their recommended width requirements for the pipe ditch, the working side, and spoil side. The information was tabulated and an average construction right-of-way width was determined for the four pipe diameter groups.

The contractors identified the following widths:

Pipe Diameter (Inches)	Right-of-Way Widths (Feet)
8 to 16	80
18 to 24	93
30 to 36	110
40 to 42	121



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# COMPANIES AND ORGANIZATIONS

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INGAA Foundation

Recommended Width

## 2.5 Comparison of Right-of-Way Width Requirements

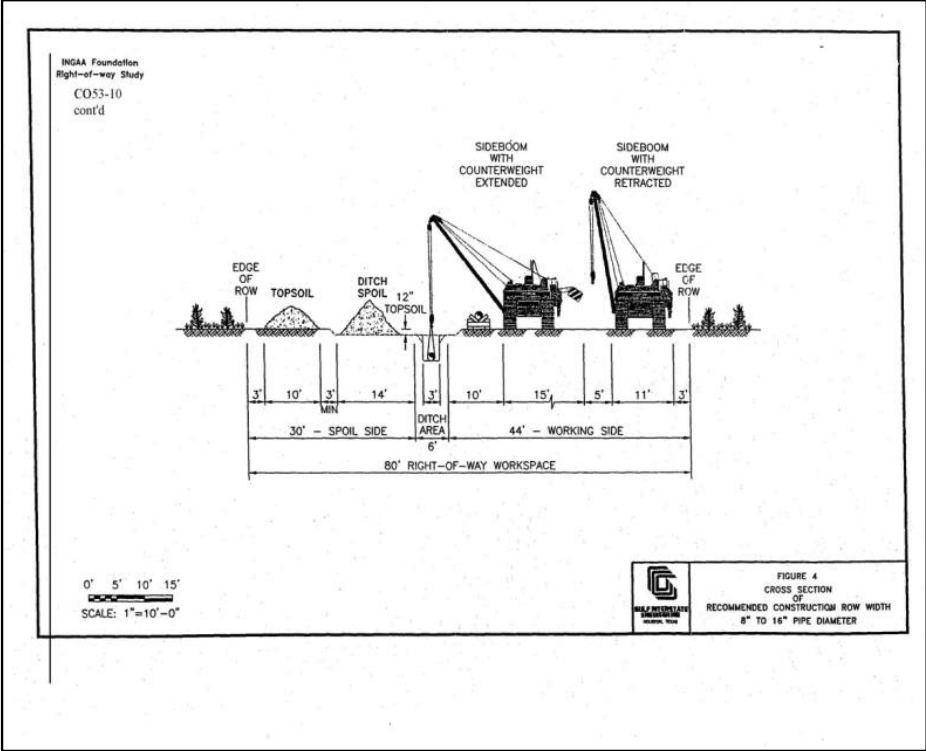
A comparison of right-of-way width requirements between the Engineering Approach and Contractors' Requirements are given in Table 1. The width recommended by the Engineering Approach is equal to or minimally greater than the average of widths requested by the contractors. GIE believes that the Contractors' width requirements vary because of individual interpretation of soil conditions and different terrain.

**TABLE 1**  
**Comparison of Right-of-Way Width Requirements**  
**Engineering Approach versus Contractors' Requirements**

Pipe O.D. Range (in.)	Right-of-Way Width Required by Contractors (Feet)										Engineering Approach (feet)
	Individual Contractors are listed as A to I										
	A	B	C	D	E	F	G	H	I	Average Width	
8 to 16	70	75	84	90	85	80	90	75	75	80	80
18 to 24	80	100	89	95	100	90	100	90	90	93	95
30 to 36	100	127	99	115	110	115	110	100	115	110	110
40 to 42	110	143	118	120	115	125	120	115	125	121	125

COMPANIES AND ORGANIZATIONS

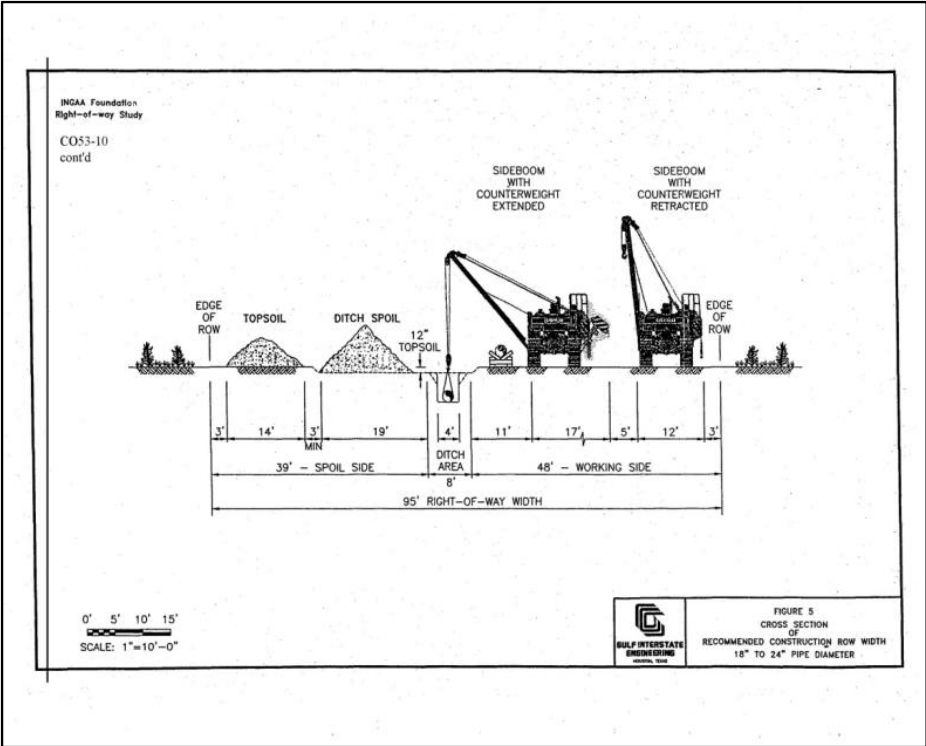
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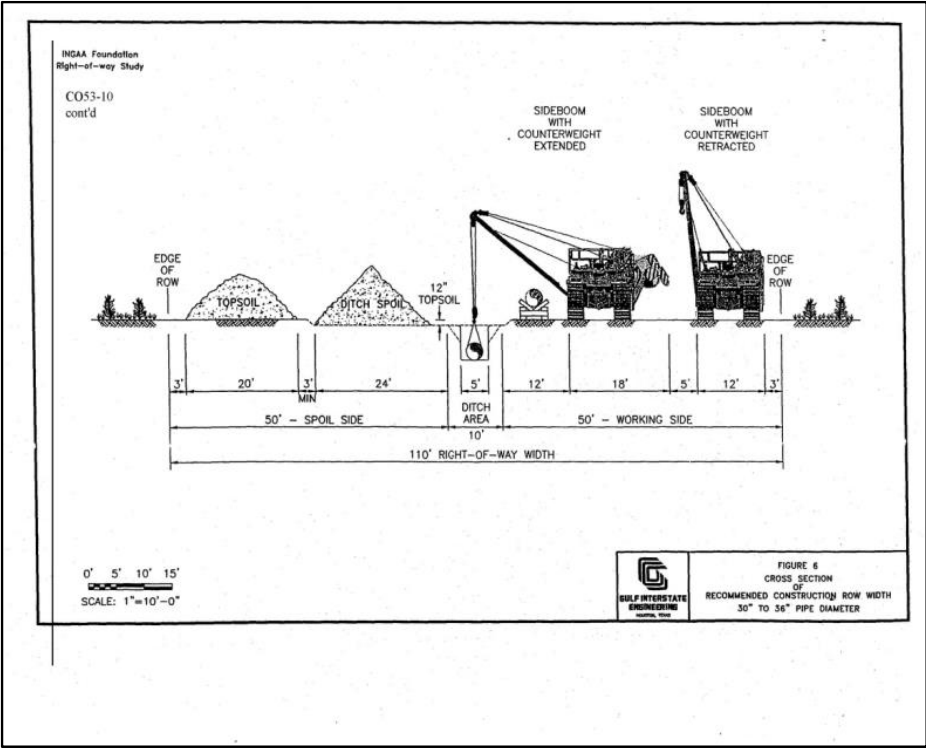
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COMPANIES AND ORGANIZATIONS

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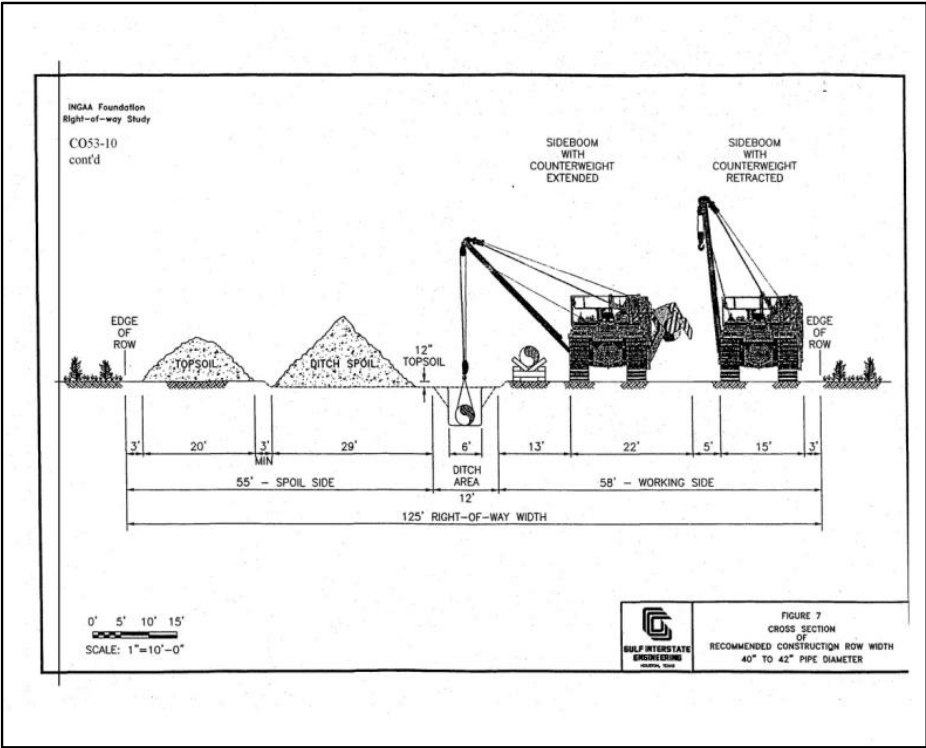


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# COMPANIES AND ORGANIZATIONS

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Modifying Recommended Width

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### 3.0

#### Modifying the Recommended Construction Right-of-Way Width

The recommended construction right-of-way width was discussed in Section 2.0. This section identifies and provides a brief discussion of variables that could possibly modify the recommended right-of-way width.

##### 3.1 Variables that Affect Right-of-Way Width

Major variables that can increase or decrease the typical construction right-of-way are:

- (1) Environmental, Cultural, Archeological
- (2) Design Considerations
- (3) Terrain
- (4) Soils and Rock
- (5) Landowner Requirements
- (6) Construction Plans
- (7) Special Construction Work Areas
- (8) Uncertainties

Table 2 shows how each major variable was subdivided for purposes of discussion and summarizes the impact of each variable on the construction right-of-way width.

##### (1) Environmental, Cultural, and Archeological

New pipelines are carefully routed to avoid land areas of special environmental, cultural, and archeological significance. Alternate routes are identified that route the pipeline around special use lands, residences, and public areas that add many miles to the straight-line distance between the origin and destination point of the pipeline. Project sponsors take great care and assume considerable additional expense to route a pipeline, but in some cases even the least intrusive alternate route will pass through special land use areas.



# COMPANIES AND ORGANIZATIONS

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INGAA Foundation

Modifying Recommended Width

### (2) Design Considerations

**Pipe diameter** – Pipe diameter is the major determinant of the width of the ditch. The diameter of the pipe determines the amount of ditch excavation material and the type and size of the construction equipment needed, and therefore has a direct relationship to the increase or decrease of the construction right-of-way width.

**Pipe depth**—The depth of the pipeline affects the amount of excavated material to be removed and stockpiled during pipeline construction. Increased pipeline cover requirements, as may be required on agricultural land and steep terrain, would increase the spoil side and overall width of the construction right-of-way.

### (3) Terrain

**Undulating alignment profile**—Pipeline construction normally takes place on a reasonably leveled construction work area to permit the movement of equipment onto and along the right-of-way. Undulating topography requires the leveling of high areas to create a more uniformly leveled construction right-of-way. This process may result in increased movement of soil and the need for stockpiling along the right-of-way.

**Alignment grade**—The right-of-way must be reasonably level to accommodate the efficient and safe movement of construction equipment and materials during pipeline construction. Ditching on severe inclines or steep grades may not require special pipeline construction equipment, just more of it. A common technique is to use cables to tie the working backhoe or ditcher to several tow tractors positioned at different levels along the right-of-way above it. Tension on the cables enables the excavation equipment below to hold the position for efficient digging. These tractors gradually tow the excavation equipment up the grade as ditching progresses. The increased complexity required for this pipeline construction approach on steep mountainous inclines typically increases the construction right-of-way width.

**Side slope grade**—The high point of a steep side slope is cut and sloped to provide a level working surface for the right-of-way. The cut soil material is either stockpiled or used to fill in nearby low points in undulating terrain. Most of the soil produced by the side slope cut is not suitable as backfill material. Therefore, steep side slopes increase the construction right-of-way width.

### (4) Soil and Rock

**Soil and rock type**—The soil type and the physical characteristics of excavated soil materials determine their performance during pipeline construction and affect ditch design.

# COMPANIES AND ORGANIZATIONS

## CO53 – James Bacon for CWCWC (cont'd)

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Modifying Recommended Width

Consolidated rock and very cohesive stable soils result in a vertical wall ditch and less excavated material. Noncohesive, unstable, organic, and sandy soils create large spoil piles, and may result in a sloping wall ditch.

The organic and moisture content of soils assumed to exist in the right-of-way during the preliminary design and construction planning phases can differ from that found during the actual construction phase. Stockpiled soils with greater organic and less cohesive material than originally assumed tend to be weaker and do not allow for maximum stockpiling height.

If the ditch soils are wet, the ditch walls become unstable and slough, further limiting the remaining workspace for construction activities. Therefore, the type, characteristics, and condition of soil materials found during excavation for the pipeline will increase construction right-of-way width. Excavated soils may "swell" (increase) in volume by as much as 30 percent.

**Soil and rock depth**—The depth of topsoil and subsoils and rock removed during pipeline excavation activities determine the volume, area and width of the stockpile along the right-of-way.

**Rock disposition by stockpiling**—Rock removed by blasting is normally not acceptable as a backfill material until it is reduced in size. When rock is encountered during pipeline construction, and its immediate removal from the right-of-way is not required, the rock is separated from topsoil and subsoils and stockpiled, normally increasing the construction right-of-way width.

**Soil segregation requirements**—Pipeline construction contractors recognize the value of soil resources and make a concerted effort to implement soil conservation practices during pipeline construction. On cultivated areas, an initial shallow soil stripping operation run is performed to remove only the topsoil. This technique, known as *topsoiling*, places the topsoil in a spoil bank separate from the rest of the ditch excavation material. Later during backfilling, the valuable topsoil and other excavation spoil can be replaced in their original positions.

The removal, segregation, and stockpiling of topsoil in agricultural land across the entire right-of-way is used to minimize impact on topsoils. However, these special soil conservation measures increase the construction right-of-way width.

Topsoil segregation in some areas along the selected route of a pipeline is not required, resulting in only one spoil pile and, therefore, a decrease of the construction right-of-way width. Occasionally, lower topsoil material is uniquely different from the surface topsoil, requiring additional topsoil segregation.

# COMPANIES AND ORGANIZATIONS

## CO53 – James Bacon for CWCWC (cont'd)

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Modifying Recommended Width

**Special erosion control requirements**—The use of conventional erosion control methods, such as silt fences and hay bales, on moderately sloped agricultural land during mildly wet weather is a required practice. However, in steep sloped terrain, the use of runoff diversion ditches and other specialized erosion control methods may increase the construction right-of-way width.

### (5) **Landowner Requirements**

**Construction through narrow corridors bounded by structures**—Occasionally it is necessary to route a pipeline through a congested and densely populated residential, commercial or industrial area. In these areas, special restrictions on construction right-of-way work activities may be imposed and result in a decreased right-of-way width. The decrease in construction right-of-way width in these areas may require longer staging areas outside the constrained area.

**Timber disposition by stockpiling**—Contract specifications, state and local regulations, and property owner requirements, all affect the nature of the disposal of the brush and timber encountered on the right-of-way. It is very common to clear the right-of-way by cutting large trees, saving large marketable timber for the property owner by sawing into usable lengths, and stacking the logs at various locations along the right-of-way. The temporary stockpiling of timber for the property owner increases the construction right-of-way width.

### (6) **Construction Plans**

**Inadequate temporary access roads**—Planning adequate access roads is shared between the contractor and the pipeline company. The project sponsor is responsible for securing the land on which to build a proposed pipeline. Existing roads that intersect the right-of-way are the usual means for access to the pipeline. In the absence of existing roads, special access roads, known as shooflies, must be constructed to link the right-of-way with the existing roads. An inadequate number and improper location of temporary construction access roads requires the contractor to consider the movement of men and equipment using turnaround areas along the pipeline right-of-way. The inadequacy of temporary access roads and the resulting need for turnarounds typically increases the construction right-of-way width.

**Automatic welding method**—The typical welding method for most pipeline construction is manual stick-welding. As weld joint metal deposition rates become significant for large diameter pipelines, semiautomatic and automatic welding methods may be employed. The use of large automatic welding machines and the handling sideboom will require more construction workspace as compared to the typical workspace requirements of stick-welding. The semiautomatic or automatic type of welding method may increase the construction right-of-way width. However, the benefits of automatic welding, such as fewer contractor personnel and fewer repairs, can offset the impact of a wider right-of-way.

# COMPANIES AND ORGANIZATIONS

## CO53 – James Bacon for CWCWC (cont'd)

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### (7) Special Construction Work Areas

A FERC application for a pipeline project requires the development of site specific work plans that show extra workspace for situations such as steep side slopes, wetlands, bodies of water, roads, railroads, and aboveground facilities. Extra workspace areas for these special construction activities are in addition to the baseline determination of the typical pipeline construction right-of-way width.

**Foreign structure—** The type and relative location of a pipeline, utility, or other structure, above or below ground, either parallel or crossing the new pipeline, typically requires additional construction workspace.

A crossing structure typically requires additional workspace. Additionally, when the proposed pipeline is parallel to an existing belowground pipeline, utility, or other structure, less new permanent right-of-way is added to the existing permanent right-of-way, and some of the new construction right-of-way overlaps the existing right-of-way. However, the construction complexity of the new pipeline generally increases. The existence of a parallel, belowground foreign structure typically requires additional construction workspace beyond that which is available within a typical construction right-of-way width.

The owner of another pipeline, utility, or structure may impose a special minimum horizontal or vertical separation distance between the proposed pipeline and the existing structure to assure their integrity during the new pipeline construction and later during long term operations. The owner may also prohibit any new pipeline construction within the existing permanent operating right-of-way of the other pipeline, utility, or other structure. The minimum horizontal or vertical separation distance may increase the proposed new pipeline construction right-of-way width.

**Surface land use classification—**Current land use can have a major impact on specific regulatory and landowner requirements for pipeline construction and often establishes the soil conservation procedures to be used.

For example, the conservation of soils across agricultural farmland requires topsoiling. Timber from woodlands may need to be stockpiled for the landowner along the right-of-way. A pipeline planned through a narrow residential, commercial or industrial corridor may encounter limited or restricted widths. Therefore, the type of land use may increase or decrease the construction right-of-way width.

**Construction through wetlands—**The routing of a pipeline through wetlands challenges the pipeline contractor to employ special construction methods and techniques to minimize environmental impact.

# COMPANIES AND ORGANIZATIONS

## CO53 – James Bacon for CWCWC (cont'd)

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Modifying Recommended Width

Conventional cross-country upland construction techniques have been used historically to cross wetlands during dry and semi dry conditions. However, wet and saturated surface conditions often require additional measures to assure the safe movement of men and equipment along the right-of-way. Wooden mats composed of large timber boards have been used for the effective and safe movement of construction equipment and workers. In cold northern climates, freezing winter weather conditions allow the movement of pipeline construction equipment over a frozen ground surface resulting in reduced environmental impact.

Alternative construction methods can be used to reduce construction impact on the environment. The INGAA Foundation, for example, has funded research on potential environmental impacts associated with horizontal directional drilling at watercourse crossings. The project also produced software to help select alternative watercourse crossing methods.<sup>1</sup>

### (8) Uncertainties

**Unknown underground structures**—During planning for pipeline projects, various field surveys of aboveground and belowground utilities are performed. The field surveys are intended to identify the various pipelines, utilities, and other structures in close proximity to the proposed pipeline, so pipeline crossings, or a parallel design plan, can be developed. However, even after the best survey work is completed, some underground structures, such as clay drainage tiles in agricultural farm land, cannot be identified before beginning the pipeline construction. The frequency of drainage tile may increase the right-of-way width requirements.

**Unexpected inclement weather**— The onset of severe weather, such as rain and near or below freezing temperatures, may result in the need for more right-of-way width. If prolonged rains saturate the ground, efficient movement of construction equipment and workers is more difficult, and spoil piles spread out.

### 3.2 Special Work Areas

The following special situations normally require extra workspace, staging areas, and aboveground facilities in addition to those normally available within the typical pipeline construction right-of-way width.

#### Other Extra Workspaces

- Roads and highways
- Railroads
- Water Crossings - creek, stream, river, or lake

<sup>1</sup> Golder Associates, Ltd., *River and Stream Crossings Study, Executive Summary and Crossing™ Stream Crossing Decision Support System*, Beta-Version 1.0 Software and Topical Report (INGAA Foundation) 1998.

# COMPANIES AND ORGANIZATIONS


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Modifying Recommended Width

- Wetlands
- Special pipeline construction areas (fabrication, testing, tie-ins, branch laterals, etc.)

Staging Areas

- Contractor mobilization/demobilization and staging areas
- Pipe storage, coating and staging areas
- Material warehouses and storage yards
- Bending machine set-up

Aboveground Facilities


- Compressor stations, metering and regulation stations, scraper trap facilities, and valve sites

3.3 Regulatory Modifications

Even the most carefully planned projects will encounter situations along the pipeline route that necessitate a change in the construction right-of-way granted in the certificate. Information on field conditions may be limited because the sponsor lacks access to the property before the certificate is issued. The project sponsor may need to request somewhat more right-of-way to avoid potential problems encountered in the construction phase.

There are numerous circumstances that will require modification of basic width requirements. FERC permits pipelines to request a variance in workspace based on the site specific conditions. Variance requests must include construction drawings and present a rationale/justification for the requested change. GIE's recommended baseline construction widths will not change FERC's variance procedure; however, it would significantly reduce the potential number of variance requests required for future projects if a construction right-of-way of 75 feet were to become the "rule-of-thumb" in the future.

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# COMPANIES AND ORGANIZATIONS

CO53 – James Bacon for CWCWC (cont'd)

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Modifying Recommended Width

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cont'd

**TABLE 2**

**Engineering Variables that Affect Construction Right-of-Way Width**

Variable	Decrease Width	Increase Width	*Extra Work Space
<b>1. Environmental, Cultural, and Archeological</b>	X		X
<b>2. Design Considerations</b>			
Pipe Diameter (Included in the Recommended Width)	X	X	
Pipe Depth (Included in the Recommended Width)	X	X	
<b>3. Terrain</b>			
Undulating Alignment Profile		X	X
Alignment Grade		X	X
Side Slope Grade		X	X
<b>4. Soils and Rock</b>			
Soil and Rock Type	X	X	
Soil and Rock Depth	X	X	
Rock Disposition by Stockpiling		X	X
Soil Segregation Requirements	X	X	X
Special Erosion Control Requirements		X	
<b>5. Landowner Requirements</b>			
Construction Through Narrow Corridors Bounded by Structures	X		
Timber Disposition by Stockpiling		X	X
<b>6. Construction Plans</b>			
Inadequate Temporary Access Roads		X	
Automatic Welding Method		X	
<b>7. Special Construction Work Areas</b>			
Foreign Structure			X
Surface Land Use Classification	X	X	X
Construction Through Wetlands	X	X	X
<b>8. Uncertainties</b>			
Unknown Underground Structures-Frequency of Tile	X	X	
Unexpected Inclement Weather		X	

\* Extra workspace (area outside the main right-of-way) is required along the construction right-of-way where specialized equipment and crews install pipe at crossings or congested areas, such as overhead utility structures and parallel underground structures. Extra workspace is not evaluated or discussed in this study.

# COMPANIES AND ORGANIZATIONS

## CO53 – James Bacon for CWCWC (cont'd)

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Worker Safety

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### 4.0

#### Considerations for Worker Safety

Responses to the study questionnaires indicated that there are mounting concerns among pipeline construction and safety personnel that unnecessarily restricted workspace may be inconsistent with federal and state safety laws. A safe work site must be the responsibility of all parties involved in a pipeline project from engineering planning, regulatory review, and pipeline construction. Federal and state worker safety laws (work in confined or limited spaces) affect the amount of construction right-of-way needed.

##### 4.1 Major Federal Regulations for Safety in Pipeline Construction

At present all construction activities in the United States are governed by the Code of Federal Regulations Title 29, Part 1926 (29 CFR 1926). Certain sections of this code have a direct effect on the construction methods employed by individual contractors in order to minimize risks to worker safety.

The following is a list of sections of the code that are relevant to pipeline construction methods and associated safety issues.

Subpart D - Occupational Health and Environmental Controls  
Section 1926.50 - Medical Services and First Aid

Subpart F - Fire Protection and Prevention  
Section 1926.150 - Fire Protection

Section Subpart H - Materials Handling, Storage, Use, and Disposal  
1926.250 - General Requirements for Storage

Subpart N - Cranes, Derricks, Hoists, Elevators, and Conveyors  
Section 1926.550 - Cranes and Derricks

Subpart P - Excavations  
Section 1926.651 - Specific Excavation Requirements  
Section 1926.652 - Requirements for Protective Systems



# COMPANIES AND ORGANIZATIONS

CO53 – James Bacon for CWCWC (cont'd)

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Worker Safety

## 4.2 OSHA Compliance Issues Created by Right-of-Way Width

Sections or subparts of sections listed in Section 4.1 are cited and discussed to show how compliance is hindered by limiting pipeline construction right-of-way widths.

**Section 1926.50, Paragraph (b): Provisions shall be made prior to commencement of the project for prompt medical attention in case of serious injury.**

Narrow right-of-way widths can limit a clear passage along the construction right-of-way for medical emergencies and place the construction contractor in potential violation of the law.

**Section 1926.150, Paragraph (a): General requirements.**

- (1) **The employer shall be responsible for the development of a fire protection program to be followed throughout all phases of the construction and demolition work, and he shall provide for the fire fighting equipment as specified in this subpart. As fire hazards occur, there shall be no delay in providing the necessary equipment.**
- (2) **Access to all available fire fighting equipment shall be maintained at all times.**

Narrow right-of-way widths can reduce or eliminate a clear passage along the construction right-of-way for response to fires and place the contractor in potential violation of the law.

# COMPANIES AND ORGANIZATIONS

CO53 – James Bacon for CWCWC (cont'd)

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Worker Safety

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## Section 1926.250, Paragraph (a): General.

- (1) All materials stored in tiers shall be stacked, racked, blocked, interlocked, or otherwise secured to prevent sliding, falling or collapse.
- (4) When a difference in road or working levels exist, means such as ramps, blocking, or grading shall be used to ensure the safe movement of vehicles between the two levels.

## Section 1926.250, Paragraph (b): Material storage.

- (8)(ii) Lumber shall be stacked on level and solidly supported sills.
- (8)(iii) Lumber shall be so stacked as to be stable and self-supporting
- (9) Structural steel, poles, pipe, bar stock, and other cylindrical materials, unless racked, shall be stacked and blocked so as to prevent spreading or tilting.

Restrictive workspace creates a tension with these rules for safe storage of construction materials (pipe, heavy timber, large valves, blasted rock, and ditch spoil).

## Section 1926.250, Paragraph (c): Housekeeping.

- (1) Storage areas shall be kept free from accumulation of materials that constitute hazards from tripping, fire, explosion, or pest harborage. Vegetation control will be exercised when necessary.

Good housekeeping may become impossible due to restricted workspace.

## Section 1926.550, Paragraph (a): General requirements.

- (1) The employer shall comply with the manufacturer's specifications and limitations applicable to the operation of any and all cranes and derricks.
- (19) All employees shall be kept clear of loads about to be lifted and of suspended loads.

Restricted workspace may make safe personnel clearances from cranes, track hoes, sidebooms, and hoisting trucks difficult to achieve.

# COMPANIES AND ORGANIZATIONS

## CO53 – James Bacon for CWCWC (cont'd)

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### Section 1926.651, Paragraph (a): Surface encumbrances.

All surface encumbrances that are located so as to create a hazard to employees shall be removed or supported, as necessary, to safeguard employees.

### Section 1926.651, Paragraph (e): Exposure to falling loads.

No employee shall be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials.

### Section 1926.651, Paragraph (j): Protection of employees from loose rock or soil.

- (2) Employees shall be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into excavations. Protection shall be provided by placing and keeping such materials or equipment at least 2 feet (.61 m) from the edge of excavations, or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.

Positioning, placing, or keeping equipment and construction materials at least 2 feet from the edge of open trenches (including pipeline ditches) is difficult or impossible when there is insufficient workspace.

### Section 1926.652, Paragraph (b): Allowable configurations and slopes.

- (1) *Option (1)—Allowable configurations and slopes* (i) Excavations shall be sloped at an angle not steeper than one and one-half horizontal to one vertical (34 degrees measured from the horizontal)...


If side wall retaining devices cannot be installed and/or maintained at all times for vertical wall ditches greater than 60 inches in depth, then the ditch wall height in excess of 42 inches must be sloped back to an angle, not less than 34 degrees from the vertical. Depending on depth, this regulation could substantially widen the mouth of the pipeline ditch. To obtain and/or maintain proper sloping may become impossible with restricted right-of-way width. Granted, there are many other ways to protect workers from cave-ins during tie-ins, but they require much more time, effort, and resources than proper sloping.

# COMPANIES AND ORGANIZATIONS

## CO53 – James Bacon for CWCWC (cont'd)

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Worker Safety

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The above safety regulations are just a few of the OSHA Construction Standards contained in 29 CFR 1926. These specific regulations are most likely to affect construction for right-of-way widths.


**4.3 Safety Perspective**

Individual worker safety is paramount to the success of the project. Workplace safety is all of the following:

- Reduction of serious injury and fatal accidents
- Good business practice
- Required by most companies both large and small
- Regulated by federal and state law
- Enforced by many federal and state agencies

While much progress has been made in the area of pipeline construction safety, this study proposes that worker safety issues receive full consideration with potential environmental impacts and land take issues. Limiting pipeline construction right-of-way widths must be carefully balanced for safe, workable pipeline construction.

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Individual Comments

# COMPANIES AND ORGANIZATIONS

## CO53 – James Bacon for CWCWC (cont'd)

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INGAA Foundation

Environmental

### 5.0

#### Potential Environmental Impact of Increased Construction Right-of-Way Width

This section addresses the potential changes in overall environmental impact as the result of an increase in the width of pipeline construction rights-of-way. It addresses the impact of a temporary construction right-of-way on the environment. The impact of permanent right-of-way is addressed in FERC regulations, federal, state, and local permit and certificate guidelines.

Additional construction right-of-way width on some pipeline construction projects can be environmentally favorable, not only to pipeline companies and their construction contractors, but also from the perspective of environmental and regulatory reviewing agencies. In addition, a small increase in the construction right-of-way width provides a needed margin of worker safety with little additional impact on the environment.

The right-of-way widths recommended in this study will provide for optimum construction efficiency and thereby reduce construction time. This means less risk of weather interference, quicker stream and wetland crossings and less soil compaction.

##### 5.1 Positive Impacts Associated with Pipeline Construction

It can be demonstrated that additional construction right-of-way width does not proportionally or even necessarily, increase overall environmental impact. While the potential positive environmental impacts of new pipeline construction are seldom recognized, some well established benefits are listed below.

- Forest fragmentation (known to help control/prevent the spread of forest destroying insects, wild fires, and certain plant diseases)
- Creation of new border areas (favored by many forage fauna)
- Removal of undesirable or non-native plant communities
- Improved bio-diversity of local habitats
- Opportunity for new plant and animal recruitment
- Opportunity to restore degraded wetlands
- Habitat management and fire protection access into remote areas
- Desirable changes in soil mix or compaction

# COMPANIES AND ORGANIZATIONS

## CO53 – James Bacon for CWCWC (cont'd)

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### 5.2 Actual Impact of Increased Temporary Construction Right-of-Way Width on the Environment

The following assumptions are made to establish a technical basis for discussing additional environmental impact that might result from the granting of a wider pipeline construction right-of-way:

- A sponsor is planning to install a 36 inch pipeline with a 90 foot right-of-way. During the planning and preliminary engineering phase, it is discovered that additional temporary construction right-of-way width is required for safe operations. The project sponsor decides to increase the right-of-way width from 90 feet to the 110 feet recommended in this study. Table 3 lists the potential environmental impacts and their significance if the right-of-way were increased. A brief discussion of the significance of the additional environmental impact is given after Table 3.
- All potential environmental and socioeconomic impacts have been identified, assessed and deemed acceptable or mitigatable for this particular pipeline construction right-of-way.

In addition, it is assumed that within the 25 mile baseline construction right-of-way segment, as described in Section 2, specific construction right-of-way conditions already exist. These conditions are as follows:

- Baseline environmental data reveal no extremely sensitive habitats, critical wetlands, threatened or endangered species, highly prized forest or other vegetation and no prized or unique farmland near the proposed right-of-way.
- The local environment has been disturbed or modified in the past by agricultural land clearing and routine harvesting of forest resources.
- The animal and plant communities disturbed or fragmented by the pipeline right-of-way are similar to those found on adjacent land.
- Proper construction methods and restoration techniques have been carefully selected and fully developed and cleanup and restoration of the right-of-way will occur as planned.

Several major types of environmental effects would have to be identified and assessed in order to determine what the real extent of increased impact would be from the granting of a wider pipeline construction right-of-way.

# COMPANIES AND ORGANIZATIONS

CO53 – James Bacon for CWCWC (cont'd)

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cont'd

Table 3  
Environmental Impact Increases  
Due To  
Increased Pipeline Construction Right-of-Way Widths

Potential Environmental Impacts	Significance of Impact					
	Forested Areas	Lower Vegetation Areas	Pasture & Range Land	Cultivated Farm Land	Rivers & Streams	Wetlands
Increases visual impact	MIN	MIN	INS	NN	MIN	MIN
Reduces air quality	NN	NN	NN	NN	NN	NN
Increases noise level	NN	NN	NN	NN	NN	NN
Reduces water resources quality	INS	INS	INS	INS	1-20%	1-20%
Increases disruption of lower vegetation	INS	1-20%	INS	NN	MIN	1-20%
Increases deforestation	1-20%	MIN	NN	NN	1-20%	1-20%
Increases forest fragmentation	INS	INS	NN	NN	MIN	1-20%
Increases opportunity for soil erosion and sedimentation	1-20%	1-20%	1-20%	1-20%	1-20%	1-20%
Changes local drainage patterns and area hydrology	NN	NN	NN	NN	1-20%	1-20%
Changes in soil chemistry and compaction	MIN	MIN	MIN	MIN	MIN	1-20%
Disturbances of animal and plant community structure	1-20%	1-20%	MIN	NN	MIN	1-20%
Chemical, fuel and oil spills	INS	INS	INS	INS	INS	INS
Reduces recreational opportunities	MIN	MIN	NN	NN	1-20%	MIN
Increases opportunities for public intrusion into more remote areas	NN	NN	NN	NN	MIN	NN

Notes:

1. This matrix lists the significance of additional impacts on different elements of the environment due to an increase (up to 20 percent) over a baseline pipeline construction right-of-way width.

2. "Increased Right-of-Way Width" means up to 20 percent additional width over a baseline pipeline construction right-of-way width.

3. INS - Insignificant

MIN - Minimum

NN - None

1-20% - This means that the impact is directly proportional to the percent increase of the pipeline construction right-of-way width.

# COMPANIES AND ORGANIZATIONS

## CO53 – James Bacon for CWCWC (cont'd)

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**Increases visual impact**—As with many areas of socioeconomic impact analysis, visual impacts can be very individualized and subjective, and may vary considerably. Viewer sensitivity is usually governed by the proximity of industrial activities and the degree of viewer interest in the scenic qualities of the local landscape.

The impact on visible resources is determined by major changes to the natural environment along the baseline construction right-of-way width. In other words, once construction is underway the average viewer would not discern differences between 90 feet and 110 feet where visual impact alone is concerned.

**Reduces air quality**—Project specific short-term air pollution may directly cause nuisance and health risks to local animal, plant, and human populations. Pollution of the surrounding air along the baseline construction right-of-way would originate from the use of trucks, heavy equipment, and certain construction materials or procedures used to construct the pipeline. Since no additional use of equipment and materials would be associated with increases in width of the construction right-of-way, there would be no incremental reduction in short-term air quality due to increasing temporary construction right-of-way. Indeed, effects on short-term air quality would be reduced by speedier and more efficient construction.

**Increases noise level**—Although not an obvious threat to public health, noise pollution affects a local community. An acceptable noise level has already been decided for the baseline construction right-of-way width, and noise levels would not increase due to requesting and granting a wider construction right-of-way. Adequate right-of-way width may decrease the number of access roads required by the construction site, thereby decreasing the off right-of-way traffic and disturbance.

As with air quality, noise level could decrease if the increased width of the right-of-way results in better maneuverability and less vehicle time spent on the right-of-way. This may be true even if there is additional clearing and cleanup that is required.

**Reduces water resources quality**—In public opinion polls, water is noted by many residents of the United States as the most important environmentally sensitive natural resource. In a pipeline construction project, the possibility of water resource contamination is most likely during land clearing and excavation activities. These activities occur during a brief time window in the construction process with remediation and restoration activities soon following. Speedy and efficient pipeline construction will decrease the probability of adverse impacts on water quality.



# COMPANIES AND ORGANIZATIONS

CO53 – James Bacon for CWCWC (cont'd)

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**Increases disruption of lower vegetation**—The analysis of impact caused by direct loss of vegetation will depend greatly on the value of the vegetative community that maybe destroyed. If the vegetation is common and unremarkable, the effects of clearing can be rated as acceptable in most cases, since the very same vegetation will reestablish itself during the first growing season from root stock and seeds left behind.

If the lower vegetation along the baseline construction right-of-way is listed as common and unremarkable and, in some cases, undesirable, as the vegetation would be part of an emergent ecosystem, the only real issues remaining are visual, erosion control, and wildlife habitat. From a visual standpoint, additional construction right-of-way width would be basically unnoticed by the average observer.

If wildlife is utilizing vegetation in the area as habitat or supporting habitat, then a percentage reduction in habitat would occur. The cumulative effect of lower vegetation being temporarily destroyed on the additional construction right-of-way requested would, in most cases, be negligible.

**Increases deforestation**—The basic model assumes that only 22 percent of a 25 mile cross-country pipeline construction right-of-way would contain a modified ecosystem, consisting of southern pine and mixed hardwood forest. Since deforestation will have to occur on the baseline construction right-of-way width, then only the effects of additional construction right-of-way width would have to be considered. The overall effect of additional width may be reasonably acceptable.

Where there is third generation growth, modified ecosystem type forest is considered a renewable natural resource by the landowner and can be exploited for economic gain in some future year. The effect of cutting now or later further reduces the potential long term environmental impact to a very acceptable level when viewed against the benefits (safety and decreased time on the right-of-way) of additional construction right-of-way width.

**Increases forest fragmentation**—As noted above, the baseline model assumed that only 22 percent of a 25 mile cross-country pipeline construction right-of-way would contain a modified ecosystem type consisting of southern pine and mixed hardwood forest. Since forest fragmentation will have to occur on the width of the baseline construction right-of-way, only the effects of additional construction right-of-way width would have to be considered from a forest fragmentation standpoint. When considered against the cumulative effect of forest fragmentation along the baseline right-of-way width as a whole, the overall effect of additional width may be reasonably acceptable. Since the construction process is temporary, mitigation measures can be implemented to lower the permanent impact of fragmentation.

# COMPANIES AND ORGANIZATIONS

## CO53 – James Bacon for CWCWC (cont'd)

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INGAA Foundation

Environmental

CO53-10

cont'd

**Increases opportunity for soil erosion and sedimentation**—The assessment of potential impacts related to soils, erosion, and sedimentation is significantly interrelated to other areas of impact assessment, particularly that of water resources. A specific level of erosion control, resulting in little or no soil sedimentation, has already been decided for the baseline construction right-of-way and would be simply carried forward with an increased right-of-way width. To the extent that construction is speedier, increased construction right-of-way width may reduce the probability of soil erosion and sedimentation.

**Changes local drainage patterns and area hydrology**—The assessment of potential impact related to drainage patterns and area hydrology is significantly interrelated to other areas of impact assessment, particularly that of water resources, soils, erosion and sedimentation, and many of the same conclusions apply here. A specific level of change in drainage patterns and area hydrology, resulting in little or no negative long term impact, has already been decided for the baseline construction right-of-way. Therefore, the additional changes to drainage patterns and area hydrology would not increase significantly, if at all, due to the granting of additional construction right-of-way width.

**Changes in soil chemistry and compaction**—Land clearing (removal of vegetation), grading, and trenching can all cause displacement and mixing of the construction right-of-way soils. This can cause both desirable and undesirable changes in soil chemistry and compaction. Careful topsoil segregation and other soil excavation techniques in agricultural lands can reduce to a minimum, the risk of negative impact. A wider construction right-of-way reduces the probability of soil compaction and changes in soil chemistry by distributing traffic loads and permitting more efficient soil separation.

**Disturbance of animal and plant community structure**—The project environmental analyst must become familiar with the communities of wildlife and lesser vegetation expected to be present within particular ecosystems within the project area. For a pipeline construction right-of-way, it is important to assess and note if land within the right-of-way limits is the same as, or different from, adjoining lands. The results of this analysis are used to develop a scenario of basic impact expected on the original baseline construction right-of-way. This can then be used for comparison, if construction is spread over a slightly wider construction right-of-way.

If in the originally proposed construction right-of-way, disturbance of animal and plant communities is rated as *low*, then additional construction width would introduce a negligible increase in the overall impact. However, if the disturbance in the original is rated as *high*, then the increased disturbance would need to be considered.

# COMPANIES AND ORGANIZATIONS

CO53 – James Bacon for CWCWC (cont'd)

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CO53-10  
cont'd



INGAA Foundation

Environmental

**Chemical, fuel, and oil spills**—Clean-up and prevention of chemical, fuel, and oil spills are regulated by federal law and are carefully avoided, but do occasionally occur. Adequate spill-prevention, response, and mitigation plans have been developed and will be implemented as required. It is further assumed that risks of environmental impact related to chemical, fuel, and oil spills have been carefully evaluated for the originally proposed construction right-of-way and were found to be acceptable. It follows that the area that could be affected by chemical, fuel, and oil spill would be increased by only a small percentage by additional construction right-of-way width. However, to the extent that a wider right-of-way reduces the probability of accidents, the risk of chemical spills would also be reduced.

**Reduces recreational opportunities**—The direct or indirect impact of construction on vegetation and temporary and/or permanent displacement of wildlife can produce secondary effects on recreational values. Vegetation and wildlife are major attractions in both expansive natural settings and in smaller, landowner held parcels of land. To the degree possible, the impacts of a proposed project on these areas must be assessed and mitigated in order to ensure the return of the recreational areas to pre-construction condition.

For the purposes of this study, it is assumed that potential impacts on recreation, both direct and indirect, have been analyzed on a short and long term basis, and are found to be acceptable for the originally proposed construction right-of-way. Therefore, the impact on the quality of recreation would increase by only a small percentage by additional construction right-of-way width.

**Increases opportunities for public intrusion into more remote areas**—Problems may occur on unfenced and unprotected public lands, where the pipeline construction right-of-way presents an inviting opportunity for all terrain vehicular traffic to venture into remote and environmentally sensitive areas. Most pipeline construction rights-of-way are situated on private property generally protected to some extent by state trespass laws. In addition, many landowners keep their property fenced with locked gates. On the pipeline construction right-of-way, enforced local trespass laws and natural or constructed barriers are important for prevention of trespassing and other intrusion into remote areas, especially at road, railroad, and river crossings.

Because some level of intrusion into remote areas may occur on the originally proposed construction right-of-way width, additional construction right-of-way width would not increase the likelihood of intrusion or trespass. A passage much narrower than any pipeline right-of-way would in fact, offer about the same opportunity for intrusion into more remote areas as a larger right-of-way. Therefore, no increased risk of intrusion or trespass would be associated with increasing the construction right-of-way width.

S-828


Individual Comments

COMPANIES AND ORGANIZATIONS

CO53 – James Bacon for CWCWC (cont'd)

S-829

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INGAA Foundation


Environmental

CO53-10  
cont'd

**5.3 Summary of Findings**

When employing carefully controlled construction and maintenance methods, a slightly wider construction and maintenance right-of-way would create only minimal additional surface area disturbance.

The increased speed and efficiency of the pipeline construction process may reduce the probability of adverse environmental impacts.

GULF INTERSTATE  
ENGINEERING

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Right-of-Way Study

COMPANIES AND ORGANIZATIONS


CO53 – James Bacon for CWCWC (cont’d)

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CO53-10  
cont'd



INGAA Foundation



GULF INTERSTATE  
ENGINEERING

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Right-of-Way Study


S-830

# COMPANIES AND ORGANIZATIONS

CO53 – James Bacon for CWCWC (cont'd)

S-831

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 INGAA Foundation

Conclusions

CO53-10  
cont'd

6.0

Conclusions

Good engineering judgement and practical field experience show that the baseline width for construction right-of-way should vary. This study indicates that in the absence of special conditions, a wider construction right-of-way may have environmental and safety benefits.


6.1 Pipeline Construction Right-of-Way Width Requirements and Federal Government Guidelines

- (1) FERC relies on the project sponsor to propose right-of-way width requirements and to provide justification for its proposal.
- (2) Federal agencies have made a conscientious effort to streamline the procedures they follow in approving the right-of-way widths for pipeline construction in order to expedite the certification process. These agencies have the difficult task of satisfying regulatory and environmental responsibilities on the one hand, and the needs of worker safety and energy consumers on the other.
- (3) In the absence of special conditions, pipeline sponsors believe they are limited to 75 feet of construction right-of-way width unless they submit justification for more work-space. They believe obtaining the required variance may be a time consuming process, jeopardizing the timeliness and viability of a project.
- (4) Engineering criteria, supported by industry field experience, indicates that establishing a set of baseline templates for construction right-of-way widths will ensure safe working conditions and minimize environmental impacts.

6.2 Pipeline Construction Right-of-Way Width Requirements

- (1) Pipe diameter is a major determinant for right-of-way construction width, along with other factors, including equipment to be used, terrain, soil conditions, and other site-specific factors.

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 GULF INTERSTATE  
ENGINEERING

Right-of-Way Study

Individual Comments

# COMPANIES AND ORGANIZATIONS

CO53 – James Bacon for CWCWC (cont'd)

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CO53-10  
cont'd



INGAA Foundation

Conclusions

- (2) Adequate right-of-way width can decrease the duration of construction and speed the completion of all final cleanup and restoration efforts.
- (3) Baseline right-of-way widths may need to be adjusted for numerous factors, including environmental, cultural and/or archeological concerns; residential, commercial and industrial densities; design considerations; terrain; soils and rock; landowner requirements; construction plans; special construction work areas; and even uncertainties.

## 6.3 Pipeline Construction and Worker Safety

- (1) Narrow right-of-way widths can result in violations of federal worker safety regulations and diminish worker safety. It is appropriate, and necessary, to consider worker safety when establishing baseline construction right-of-way widths and necessary variances.

## 6.4 Pipeline Construction and its Potential Environmental Impact

- (1) The study indicates that there is not necessarily a direct relationship between increased right-of-way width for a selected project and increased environmental impact. Indeed, increased right-of-way width can speed construction and restoration efforts and reduce the potential for negative environmental impacts.

S-832


Individual Comments

# COMPANIES AND ORGANIZATIONS

CO53 – James Bacon for CWCWC (cont'd)

S-833

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INGAA Foundation

Conclusions

CO53-10  
cont'd

7.0

Recommendations

This study recommends the following:

(1)

To ensure safe working conditions and to minimize environmental impacts, GIE proposes four baseline widths that are based on pipe diameter for the construction right-of-way. This approach will expedite the certificate process by minimizing the time requirements of sponsoring companies and FERC in preparing, evaluating, and approving variance requests.

The four baselines, which use standard default widths, are as follows:

Pipe Diameter (Inches)	Right-of-Way Widths (Feet)
8 to 16	80
18 to 24	95
30 to 36	110
40 to 42	125


(2)

These baseline widths should be adopted, with increases or decreases for special conditions. The study recognizes that temporary construction right-of-way widths may need to be narrowed in sensitive environmental areas, sites with cultural or historic significance, and densely populated areas. Construction on narrow rights-of-ways may require larger work areas at either end of the constrained area.

(2)

The effects of different soils, terrain, construction techniques and other factors may require a wider workspace than the baseline.

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GULF INTERSTATE  
ENGINEERING

Right-of-Way Study

Individual Comments




# COMPANIES AND ORGANIZATIONS

CO54 – Bruce S. Kernan for Kernan Land Trust

S-834

20140411-5031 FERC PDF (Unofficial) 4/10/2014 8:43:56 PM



*The Henry S. Kernan Land Trust & The Charlotte Forest* PO 317 / County Highway 40 / Worcester NY / 12197  
**Trustees:** H. Devereux Kernan / Catherine S. Kernan / Bruce D. S. Kernan / Christopher N. Kernan / Patricia McC. Kernan

SENT VIA ELECTRONIC FILING

Reference:

OEP/DG2E/Gas 4  
Constitution Pipeline Company, LLC  
Constitution Pipeline Project  
Iroquois Gas Transmission System, L.P.  
Wright Interconnect Project  
Docket Nos. CP13-499-000  
CP13-502-000

Ms. Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
Washington DC 20426  
Re: Docket No. CP13-499-000  
Constitution Pipeline

cc. US Army Corps of Engineers  
The FERC New York District, CENAN-OP-R  
888 First Street NE, Room 1A Upstate Regulatory Field Office  
Washington, D.C. 20426 1 Buffington Street, Bldg. 10, 3rd Floor

Dear Ms. Bose:

CO54-1

Page 3-2,3 of the DEIS for the proposed constitution pipeline says the No Action Alternative would cause

“...existing and potential users of natural gas to either pursue other means of natural gas supply, to rely on other fuels...or to seek other measures to meet or curtail their energy needs...”.

Page 3-28 of the DEIS for the proposed Constitution pipeline says,

“...according to Constitution, the full assessment and possible adoption of Alternative K would add extensive time for study, stakeholder input, agency review and permitting and

1

CO54-1

See the responses to comments CO50-53 and CO50-60. See the response to comment CO50-22 regarding signed easement agreements.

Individual Comments

# COMPANIES AND ORGANIZATIONS

## CO54 – Bruce S. Kernan for Kernan Land Trust (cont’d)

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CO54-1  
cont'd

construction, potentially adding over 2 years to the project schedule...” and “*possibly render the project non-viable from a market perspective...*” (Bold italics added)

The first statement says if the proposed pipeline is not built the demand for the energy it would supply would be met by other means. The second statement says that a delay of two years would possibly make the project non-economic.

Thus if it were to grant the Applicant a certificate of public convenience and necessary for the proposed pipeline FERC would give Constitution the power to confiscate the property of the 60% of private landowners who have refused to sign easement agreements for a project which the Applicant itself has said may not be economically viable within two years and for a market other sources could supply. The DEIS itself states the severe, irreversible and inevitable direct and indirect negative environmental impacts the proposed pipeline would cause.

Given these statements in the DEIS, FERC has no justification granting the Applicant a certification of public need and necessity.

Sincerely,

Bruce S. Kernan

# COMPANIES AND ORGANIZATIONS

CO55 – Stanton Family Farms, LLC.

Stanton Family Farms, LLC  
Kenneth G. Stanton, III  
3271 State Route 145  
Schoharie, NY 12157

Kimberly D. Bose, Secretary  
888 First Street NE, Room 1A  
Washington, DC 21426

Re: Docket Nos. CP13-499 and CP13-502

Cc:  
US Army Corps of Engineers  
New York District, CENAN-OP-R  
Upstate Regulatory Field Office  
1 Buffington Street, Bldg. 10, 3<sup>rd</sup> Floor  
Watervliet, New York 12189-4000

Re: NAN-2012-00449-UBR

April 2, 2014

Dear Ms. Bose,

ORIGINAL

FILED  
SECRETARY OF THE  
COMMISSION  
2014 APR - 8 P 2:55  
FEDERAL ENERGY  
REGULATORY COMMISSION

- CO55-1 Thank you for holding public hearings and allowing the public to respond to the Draft Environmental Impact Statement (DEIS). My granddaughter, daughter-in-law, and I spoke at the comment meeting held on Monday, March 31, 2014 at Cobleskill-Richmondville High School in Richmondville, NY. At this meeting, we were able to articulate our concerns regarding the proposed route of the Constitution Pipeline. At the present time, the pipeline is slated to do directly through the base unit of my farm. This will have a major impact on our farm and will result in us not meeting the compliance requirements for our CAFO permit. Any non-compliance is considered a violation of Environmental Conservation Law and can result in fines and/or non-renewal of the permits. In addition, we are in the process of a multi-year expansion plan. The pipeline runs right where we plan to build a new heifer/calf facility. My granddaughter plans to return to the farm upon completing her education. The pipeline could jeopardize her future here. I feel the panel at this comment meeting listened to what we had to say.
- CO55-2 As a follow up to the documentation and letters I have already submitted, I am enclosing the documents listed below.
1. 2013 Annual CAFO Compliance Report

CO55-1 The comments referenced in the public meetings and responses can be found at PM1-8 through PM1-17.

CO55-2 The supporting information provided by the Stanton family is noted. Section 3.4.3 of the EIS has been revised with new information regarding the Stanton property and our assessment of potential impact avoidance, minimization, and mitigation measures.

COMPANIES AND ORGANIZATIONS

CO55 – Stanton Family Farms, LLC. (cont'd)

CO55-2  
cont'd

- 2. An e-mail and map we received from Matthew Brower, NYS Dept. Agriculture and Markets, that proposes a route variation so the line does not pass through the center of my farm
- 3. A letter from my lender, Farm Credit East, proving my intent to expand
- 4. A proposed contract between my son Richard and my neighbor that shows the neighbor's intent to sell his land and his desire to have the pipeline on his land (Richard is not going to purchase the land. This is land where the route variation proposed by Matt Brower would be.)
- 5. A map of my farm showing the base unit of operations and where I believe the pipeline would be placed.

Thank you for considering this additional information.

Respectfully submitted,

Kenneth G. Stanton, III  
Stanton Family Farms, LLC



S-837

# COMPANIES AND ORGANIZATIONS

CO55 – Stanton Family Farms, LLC. (cont'd)

CO55-2  
cont'd

**New York State Department of Environmental Conservation**  
Division of Water  
Bureau of Water Permits, 4<sup>th</sup> Floor  
625 Broadway, Albany, New York 12233-3505  
Phone: (518) 402-8111 • FAX: (518) 402-9029  
Website: www.dec.state.ny.us



Concentrated Animal Feeding Operation (CAFO) Annual Compliance Report

GENERAL PERMIT (GP-0-09-001)  
State Pollutant Discharge Elimination System (SPDES)  
Concentrated Animal Feeding Operations (CAFOs)

Every permitted CAFO facility must submit two (2) copies of this report to the Department for the calendar year by March 31<sup>st</sup> of each year, one (1) to the above address with an original signature and one (1) copy to the DEC Regional Water Engineer (Contact list attached). Electronic, incomplete, faxed and/or illegible forms will not be accepted. The permittee shall utilize this form to report all other instances of non-compliance with permit conditions not otherwise required to be reported through the Incident Report Form. A copy of the Incident Report form is required to be submitted with this Annual Report.

Pursuant to 6 NYCRR Part 750-1.22(a) the information submitted in this report is not confidential and will not be treated as such.

SECTION I: FACILITY INFORMATION

Report for Calendar Year: 2013  
DEC Authorization No: 4-43-99-024  
DEC SPDES No: NYA 006198  
Owner/Operator Name: Ken/Richard/Lisa/Linda/Joanita Stanton  
Facility Name: Stanton Family Farm LLC

# COMPANIES AND ORGANIZATIONS

CO55 – Stanton Family Farms, LLC. (cont'd)

CO55-2  
cont'd

## SECTION II: TYPE AND NUMBER OF ANIMALS

Report the ACTUAL MAXIMUM number of each type of animal that were confined at this facility at any one time for the past year.

Type	Number in Confinement
Mature Dairy Cattle (milked or dry)	450 (including dry)
Dairy Heifers	500 (including calves)
Veal Calves	0
Other Cattle	0
Swine (55 lbs. or more)	0
Swine (under 55 lbs.)	0
Horses	0
Sheep or Lambs	0
Turkeys	0
Chickens (broilers)	0
Chickens (layers)	0
Ducks	0
Other (specify)	0

## SECTION III: MANURE, LITTER AND PROCESS WASTEWATER PRODUCTION

Report the estimated amount of manure, litter, and process wastewater that were generated at this facility in the 12-month period covered by this report. Can be reported separately or in combination if indicated as such.

- Amount of manure generated in the 12-month period covered by this report 3,373,381 (gallons)
- Amount of litter, dry or packed manure (not accounted for above) generated in the 12-month period covered by this report 0 (tons)
- Amount of process wastewater generated and collected (not already accounted for above) in the 12-month period covered by this report 750,755 (gallons)

## SECTION IV: MANURE, LITTER AND PROCESS WASTEWATER TRANSFERRED TO OTHER PERSONS

Maintain records showing the date and amount of manure, litter, and/or process wastewater that leaves the permitted operation when the amount given to any one recipient exceeds 50 tons annually (~12,000 gallons). Can be reported separately or in combination if indicated as such.

- Amount of manure transferred in the 12-month period covered by this report 255,000 (gallons)
- Amount of litter, dry or packed manure (not accounted for above) transferred in the 12-month period covered by this report 0 (tons)
- Amount of process wastewater (not accounted for above) transferred in the 12-month period covered by this report 0 (gallons)
- Is this facility(s) regulated as a CAFO facility? Yes ☐ No ☒

If yes, provide the CAFO SPDES number \_\_\_\_\_

# COMPANIES AND ORGANIZATIONS

CO55 – Stanton Family Farms, LLC. (cont'd)

CO55-2  
cont'd

## SECTION V: NUTRIENT IMPORTS

- Amount of nutrients (ex: manure, litter, process wastewater, food wastes, etc.) imported in the 12-month period covered by this report 0 (gallons or tons)  
(do not include commercial chemical fertilizers or lime or imported feedstocks)
- Describe the timeframe for acceptance of these substances (ex: daily, weekly, monthly)
- Is the facility registered under Part 360 of 6 NYCRR Yes ☐ No ☒  
If yes, provide the registration number \_\_\_\_\_
- Is the facility permitted under Part 360 of 6 NYCRR Yes ☐ No ☒  
If yes, provide the permit number \_\_\_\_\_

## SECTION VI: LAND APPLICATION OF MANURE, LITTER AND PROCESS WASTEWATER

Report the total number of acres of land that are covered by this facility's comprehensive nutrient management plan. Include all land application acres covered by the nutrient management plan, whether or not they were used for land application during the 12-month period covered by this report.

- Total number of land application acres covered by the nutrient management plan 1127 (acres)

Report the total number of acres of land where manure, litter, or process wastewater that was generated at this facility were spread. Include only land applications that are under the control of this CAFO facility.

- Total number of acres under the control of the CAFO used for land application in the 12-month period covered by this report 985 acres.

## SECTION VII: INSTANCES OF NONCOMPLIANCE NOT PREVIOUSLY REPORTED

- During the past 12-months has your facility been in compliance with the following recordkeeping requirements which have not already been reported to the Department:  
(if no, please attach a description of the noncompliance including the number of instances)

Records of precipitation events in excess of 0.3 inches?  
Yes ☒ No ☐

Records of weather conditions at time of application and for 24 hours prior to and following application including actual precipitation and forecasted conditions?  
Yes ☒ No ☐

Weekly inspections of depth readings for any open liquid storage structures?  
Yes ☒ No ☐

Records of handling and disposal of mortalities?  
Yes ☒ No ☐

Comments

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# COMPANIES AND ORGANIZATIONS

CO55 – Stanton Family Farms, LLC. (cont'd)

CO55-2  
cont'd

2. During the past 12-months has your facility been in compliance with the implementation of your CNMP? (if no, please attach a description of the noncompliance including the CNMP requirement and actual implementation with field specific information if applicable). Instances of compliance include but are not limited to:

Applications of manure, litter or process wastewater at or below CNMP rates?

Yes ☒ No ☐

Having obtained required soil tests?

Yes ☒ No ☐

Having obtained required manure analyses?

Yes ☒ No ☐

Having operated and maintained all BMPs in accordance with the CNMP requirements?

Yes ☒ No ☐

3. During the past 12-months have there been any other instances of noncompliance which have not been reported to the Department? Yes ☐ No ☒ If yes, please attach additional pages to describe the information requested, as necessary, below.

- Description of noncompliance and its cause.
- The period that the operation was in noncompliance with permit conditions, including exact dates and times.
- In those cases where the noncompliance has not been corrected, the anticipated time it is expected to continue.
- Description of the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance

Failure to meet the implementation schedule required in the facilities' CNMP is considered non-compliance and must be reported here AND in the CNMP implementation schedule in Section VIII of this report.

## SECTION VIII: ANNUAL COMPLIANCE CERTIFICATION

1. During the last 12 months were there any changes in design, construction, operation (e.g. expansion) or maintenance of your facility, where such changes have a significant effect on the amount, storage or disposal of manure, litter or process wastewater by the CAFO facility?

☐ Yes ☒ No

If yes, has your CNMP been amended to address these changes? ☐ Yes ☐ No

If no to the previous question, please explain.

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2. During the last 12 months has your CNMP been ineffective in achieving the general objectives of controlling pollutants in discharges from your CAFO? ☐ Yes ☒ No



# COMPANIES AND ORGANIZATIONS

CO55 – Stanton Family Farms, LLC. (cont'd)

CO55-2  
cont'd

If yes, has your CNMP been amended to address these circumstances? \_\_\_\_ Yes \_\_\_\_ No

If no, please explain.

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3. During the last 12 months have you made any changes to your CNMP? \_\_\_\_ Yes ☒ No

If yes, were these changes made under the direction of an AEM Certified Planner? \_\_\_\_ Yes \_\_\_\_ No

4. During the last 12 months were changes made to the planned manure, litter or process wastewater applications?  
\_\_\_\_ Yes ☒ No

If yes, were these changes made with *prior* approval from an AEM Certified Planner? \_\_\_\_ Yes \_\_\_\_ No

If no, please attach an explanation.

5. During the last 12 months were changes made to the planned crop rotations? \_\_\_\_ Yes ☒ No

If yes, were these changes made with *prior* approval from an AEM Certified Planner? \_\_\_\_ Yes \_\_\_\_ No

If no, please attach an explanation.

6. FOR LARGE CAFOs. During the last 12 months were changes made from the previous years' Annual NMP Submittal?  
\_\_\_\_ Yes \_\_\_\_ No *N/A*

If yes, attach a description of these changes in the same format as used in the Annual NMP Submittal.

If yes, were these changes made with *prior* approval from an AEM Certified Planner? \_\_\_\_ Yes \_\_\_\_ No *N/A*

7. FOR LARGE CAFOs. Have two (2) individuals representing your facility attended a NYSDEC endorsed Manure Applicator Training? \_\_\_\_ Yes \_\_\_\_ No *N/A*

If yes, please indicate date and location of the event and the names of the individuals that attended.

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8. Do you know or have reason to know of a discharge during the last 12 months of your CAFO's process wastewater that caused deposition of solids, substantial visual contrast or impacts to fish or otherwise violated 6 NYCRR Parts 700 to 705?  
\_\_\_\_ Yes ☒ No

If yes, please attach copies of the submitted Incident Report Form.

# COMPANIES AND ORGANIZATIONS

CO55 – Stanton Family Farms, LLC. (cont'd)

CO55-2  
cont'd

**SECTION IX: CNMP COMPLETION SCHEDULE** List each of the following CNMP Practices that are included in your CNMP Completion Schedule as needed to be implemented to achieve full compliance with the CAFO general permit. You must list practices that have yet to be installed including all necessary evaluations and updates to existing practices or updates to standards.

- **Barnyard Runoff Management.** Write "Barnyard Runoff Management" in the first column of the CNMP Completion Schedule for any one or more of the following: roof water management, diversion, heavy use area protection, underground outlet, fencing, critical area planting, manure/waste transfer, vegetated treatment area, etc.
- **Silage Leachate Control.** Write "Silage Leachate Control" in the first column of the CNMP Completion Schedule for any one or more of the following: waste transfer, pipeline, heavy use area protection, vegetated treatment area, etc.
- **Storage, Transfer, & Treatment.** Write "Storage, Transfer, & Treatment" in the first column of the CNMP Completion Schedule for any one or more of the following: waste storage facility, composting, anaerobic digestion, manure/waste transfer, closure of waste impoundments, etc.
- **Process Wastewater Treatment.** Write "Process Wastewater Treatment" in the first column of the CNMP Completion Schedule for any one or more of the following: manure/waste transfer, heavy use area protection, vegetated treatment area, etc.
- **Nutrient Management.** Write "Nutrient Management" in the first column of the CNMP Completion Schedule for any one or more of the following non-structural practices: proper land application of manure – soil analysis; manure analysis; N-Leach Index; P-Index; rate, timing and placement; feed/forage management, etc.
- **Record Keeping.** Write "Record Keeping" in the first column of the CNMP Completion Schedule for any one or more of the following permit or CNMP requirements for record keeping: facilities and BMP visual inspections, manure spreading records, equipment calibration records, rainfall records, etc.
- **Erosion/Runoff Management.** Write "Erosion/Runoff Management" in the first column of the CNMP Completion Schedule for any one or more of the following non-structural practices: conservation crop rotation, filter strips, buffers, diversion, waterway, terrace, cover crop, conservation tillage, strip cropping, etc.
- **Pasture Management.** Write "Pasture Management" in the first column of the CNMP Completion Schedule for any one or more of the following non-structural practices: prescribed grazing, pasture and hay planting, fence, etc.
- **Other Practices.** Explain (ex: animal mortality composting, etc.).

**CO55 – Stanton Family Farms, LLC. (cont'd)**

Please list first all practices which are required for compliance with the General Permit then include any enhancements or for future operational or management changes to be implemented. Attach additional completion schedule pages as necessary. If all required implementation is complete, mark as such. Also,

(1) The Estimated Completion Date – this date may change.

(2) **Non-Structural Practices** (group separately from other practices) - Include all non-structural practices unless the certified planner and the owner and operator determine that a structural practice that is not scheduled to be installed is required in order for the non-structural practice to be fully operational. Information for practices for which this column is marked "yes" are to be reported on a separate line(s) from those not marked "yes".

(3) Required for compliance with the CAFO general permit. Practices implemented or planned for as enhancements or for future operational or management changes are not required for full compliance.

(4) Estimated CNMP Practice Costs for yet to be implemented BMPs - The owner or operator may wish to use the NRCS guidance document entitled "Costs Associated With Development and Implementation of Comprehensive Nutrient Management Plans". The estimated CNMP practice costs will be used by the Department to determine the total costs associated with development and implementation of CNMPs in New York State.

[illegible]

Is all required implementation complete?

Yes \_\_\_\_\_ No ✓

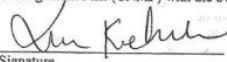
COMPANIES AND ORGANIZATIONS

CO55 – Stanton Family Farms, LLC. (cont'd)

CO55-2  
cont'd

SECTION X: PLANNER CERTIFICATION I hereby certify that:  
  
I am an Agricultural Environmental Management (AEM) Planner certified to develop and review Comprehensive Nutrient Management Plans (CNMPs) for Concentrated Animal Feeding Operations (CAFOs) in New York State.  
  
The Comprehensive Nutrient Management Plan (CNMP) developed for this operation is in full conformance with the requirements of "NRCS Conservation Practice Standard No. NY312" and New York State General Permit No. GP-0-09-001 for Concentrated Animal Feeding Operations, under authority of the New York State Pollutant Discharge Elimination System.  
  
I have reviewed the Comprehensive Nutrient Management Plan (CNMP) with the owner and/or operator responsible for the proper operations of this CAFO.  
  

Lisa Kuehnle  
Name (please print or type)

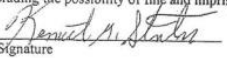
  
Signature

Date 3/10/14

SECTION XI: OWNER/OPERATOR CERTIFICATION  
  
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.  
  

Kenneth E Stanton  
Name (please print or type)

  
Signature

Date 3/10/14

8

S-845

Individual Comments

# COMPANIES AND ORGANIZATIONS

CO55 – Stanton Family Farms, LLC. (cont'd)

CO55-2  
cont'd

## LIST OF NYS DEC REGIONAL WATER ENGINEER OFFICES

REGION	COVERING THE FOLLOWING COUNTIES	DIVISION OF WATER (DOW) WATER (SPDES) PROGRAM
1	Nassau and Suffolk	Bldg 40 - SUNY @ Stony Brook Stony Brook, NY 11790-2356 Tel. (631) 444-0420
2	Bronx, Kings, New York, Queens and Richmond	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4930
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester	100 Hillside Avenue, Suite 1W White Plains, NY 10603 Tel. (914) 428-2505
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	232 Golf Course Road, P.O. Box 220 Warrensburg, NY 12885-0220 Tel. (518) 623-1200
6	Herkimer, Jefferson, Lewis, Oneida and St. Lawrence	317 Washington Street Watertown, NY 13601 Tel. (315) 785-2554
7	Broome, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga and Tompkins	615 Erie Blvd. West Syracuse, NY 13204-2400 Tel. (315) 426-7500
8	Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne and Yates	6274 East Avon-Lima Rd. Avon, NY 14414-9519 Tel. (585) 226-5450
9	Allegany, Cattaraugus, Chautauqua, Erie, Niagara and Wyoming	270 Michigan Ave. Buffalo, NY 14203-2999 Tel. (716) 851-7070

**CO55 – Stanton Family Farms, LLC. (cont'd)**

<https://mail.google.com/mail/?ui=2&ik=4616256070&as=...>

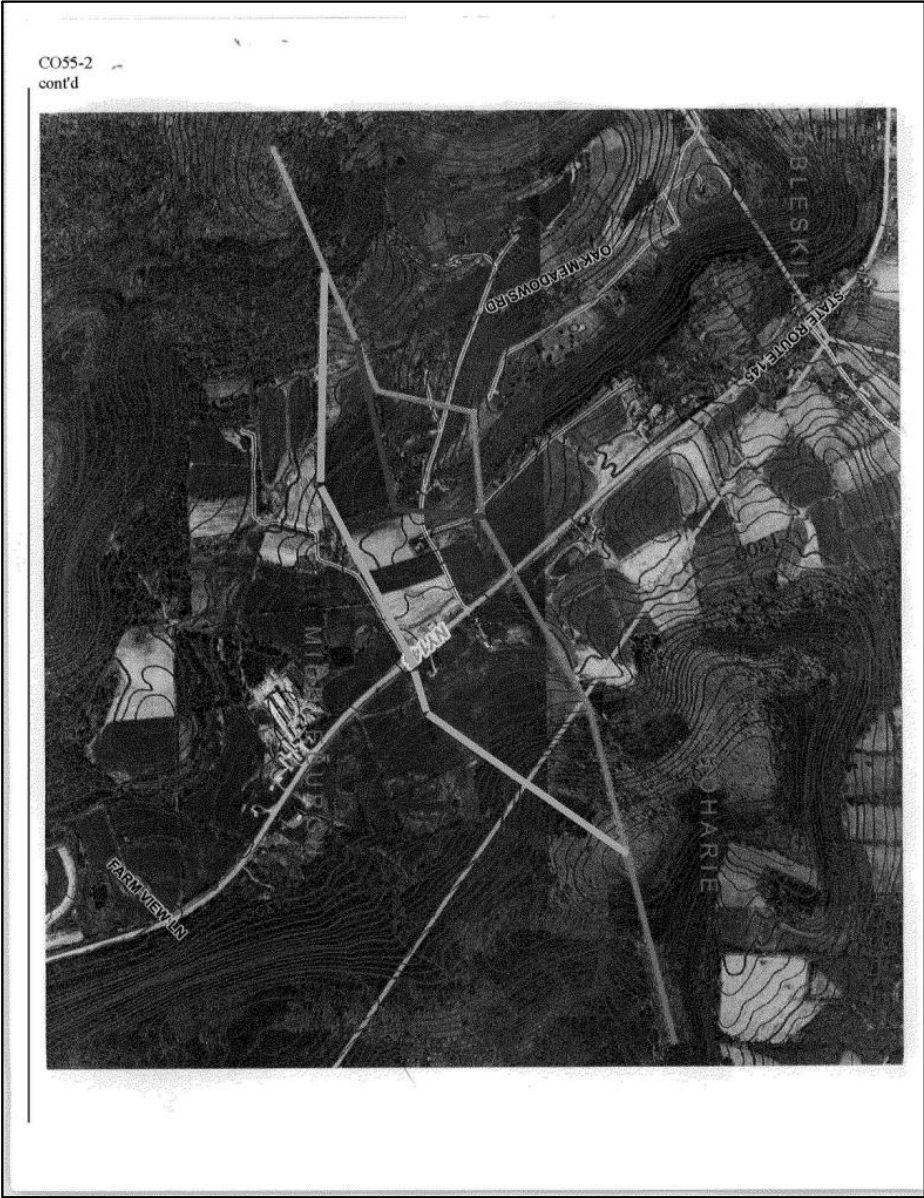
Page 1 of 2

S-847

## Individual Comments

**COMPANIES AND ORGANIZATIONS**

**CO55 – Stanton Family Farms, LLC. (cont'd)**



# COMPANIES AND ORGANIZATIONS

## CO55 – Stanton Family Farms, LLC. (cont'd)



FARM CREDIT EAST, ACA

2668 State Route 7, Suite 21, Cobleskill, NY 12043-9707

800.327.6588 • 518.296.8188

Fax 518.296.8187

FarmCreditEast.com

CO55-2  
cont'd

March 17, 2014

Stanton Family Farms, LLC  
3271 State Route 145  
Schoharie, NY 12157

RE: Borrowing Covenants and Approvals

Dear Ken:

I am writing to follow up on your inquiry for your annual loan renewal and the conditions under which we are able to approve your request. Farm Credit East, ACA has processed your requested and is renewing your loans based on the following:

- Your farm is currently in compliance with DEC laws concerning the Medium CAFO status of your farm. This includes operating under an approved Nutrient Management Plan as prepared by Lisa Kuehnle at Schoharie County Soil and Water Conservation District with annual submission of your CAFO Appendix D showing compliance with your CAFO plan.
- A change in your CAFO and Nutrient Management Plan adds additional risk exposure to your farm concerning environmental laws, fines, and the ability of Farm Credit East to continuing lending to your business and could jeopardize future expansions on your farm.

This letter also acknowledges that your request for a \$100,000.00 loan to build a new 200 freestall heifer barn and 75 head calf barn is hereby approved based on the above mentioned CAFO conditions. Your CAFO and Nutrient Management Plan currently show the ability of the farm to remain environmentally compliant with these new facilities and allow your business to continue to grow at the Home Farm location.

Should you have any questions, please feel free to contact me by phone at (518) 296-8188 or by email at [Thomas.Stokes@FarmCreditEast.com](mailto:Thomas.Stokes@FarmCreditEast.com).

Sincerely,

FARM CREDIT EAST, ACA

Thomas J. Stokes  
Loan Officer

S-849



# COMPANIES AND ORGANIZATIONS

CO55 – Stanton Family Farms, LLC. (cont'd)

CRAIG MORLANG  
Attorney and Counselor at Law  
117 Granite Drive Ste 2  
Cobleskill, New York 12043-5040  
Tel. & Fax (518) 234-2621

FYI  
7-22-13

Craig Morlang, J.D., LL.M., Taxation

June 19, 2013

PETER MAUHS, ESQ.  
PO BOX 129  
COBLESKILL, NY 12043

Re: *Catapano to Stanton*

Dear Peter:

Enclosed is a revised page 1 to the contract. The only revision is in the tax map ID for the first parcel. I left out a "1".

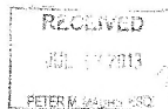
As for your recent letter on this matter:

- 1 My client will be at the premises on Thursday the 25<sup>th</sup>. Your client is free to walk around the house then.
- 2 My client is not going to enter into a contract without there being a substantial down payment. This is not the first closing for either of us.
- 3 If the pipeline goes across the lands being sold and purchased then my client will get the proceeds. If your client wishes to proceed with a closing at the agreed price of \$300,000 then he may, or alternatively he can cancel the contract. That will be his choice. However, there will be no adjustment whatsoever on account of my client receiving the pipeline proceeds and yours receiving less land than otherwise contracted for on account of any pipeline taking. My client is adamant on this point. I have spoken to him at length. There is no getting around it. If we have a deal then the contract will have to be amended to address this point.
- 4 My client is also adamant on this point: Peter Schoenecker is going to stay in accordance with the proposed contract. If your client does not wish to close until the end of December then that is fine too. The time of closing was chosen as an accommodation to your client. There is no written lease with Schoenecker.
- 5 Enclosed is a copy of that survey. It is on file at the clerk's office and may be viewed and enlarged on-line. A full copy may be made at the Real Property Tax Office.
- 6 Since we are both reviewing the contract I believe that the attorney approval clause is of no value. If it is to be signed let's get this thing into a mutually agreeable form prior to anyone signing.

Very truly yours,

No Deal

Craig Morlang



CM:s  
Encl.

CO55-2  
cont'd

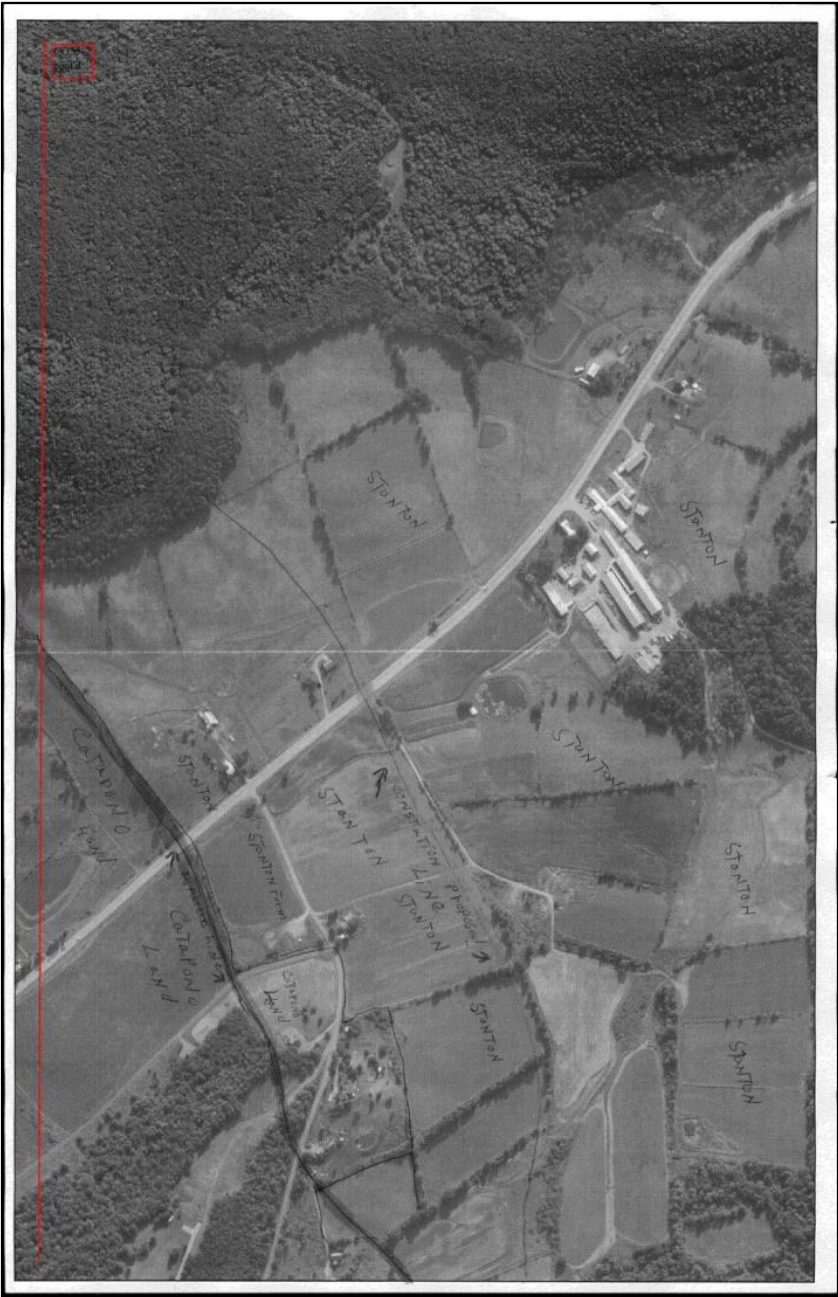
S-850

Individual Comments

COMPANIES AND ORGANIZATIONS

CO55 – Stanton Family Farms, LLC. (cont'd)

S-851



Individual Comments

# COMPANIES AND ORGANIZATIONS

CO56 – Laborers International Union of North America  
(Local 785)

20140415-0038 FERC PDF (Unofficial) 04/02/2014

## LABORERS INTERNATIONAL UNION OF NORTH AMERICA

### LOCAL 785

622 W. State Street  
Ithaca, NY 14850

David P. Marsh  
Business Manager



Phone: (607) 272-3122  
Fax: (607) 277-6883

Steve Payne, Field Representative  
Chris Bushnell, Field Representative

April 2, 2014

Kimberly Bose  
Federal Energy Regulatory Commission  
888 First Street, NE Room 1A  
Washington, DC 20426

Constitution Pipeline-docket # CP13-499

Dear Director Bose:

CO56-1

I am writing to express my support of the draft environmental impact statement, (DEIS), I believe it fairly addresses all the issues presented by the 124 mile long Constitution Pipeline Project. Constitution Pipeline Company LLC is a consortium of companies led by Williams Partners, LP a developer and operator of 18,000 miles of interstate natural gas pipeline in the United States. The DEIS states the Constitution Pipeline will allow Williams and its partners to effectively move more natural gas, to meet growing demand in the Northeast, New York City, and New England markets, while still meeting the strict regulatory requirements of New York State.

FERC acknowledged in the DEIS that there is no substitution of any non fossil fuel energy source, (solar and wind) due to unreliability and insufficient quantities. This is the best way to get the energy we need.

I have been a resident of New York State my entire life and I am a proponent of natural gas development. There is tremendous value of producing domestic, clean, and affordable energy. The economy in New York State is in serious decline. The economic benefits to the counties and New York State as a whole are significant and measurable. Approximately \$13 million annually to the four counties involved with the Constitution Pipeline. New York State needs to maximize the pipeline services offered by Williams and its partners. We cannot afford to discourage investment that leads to job creation, benefits our communities and tax base, and increases gas supply to local companies, power generators and manufacturers. We cannot allow projects like the Constitution Pipeline to continue to be disrupted by a hand full of those who oppose fossil fuel development. These same people happily use fossil fuels and products made by fossil fuels on a daily basis.

Thank you,

Chris Bushnell  
Field Representative  
New York State Resident

# LiUNA!

Feel the Power

CO56-1

The commentator's statements in support of the projects are noted.

S-852

# COMPANIES AND ORGANIZATIONS

## CO57 – Breathe Easy Susquehanna County

20140415-0040 FERC PDF (Unofficial) 04/03/2014



5

4/3/14

FERC EIS Public Hearing, Blue Ridge Highschool

- CO57-1 My name is Barbara Clifford, I am a member of the Executive Council of BREATHE EASY SUSQUEHANNA COUNTY, BESC, and I am reading the following comments on behalf of BESC. Our Mission and Goal is "To protect regional air quality and health of communities in Susquehanna County, Pa from potentially harmful air emissions released through the processes of shale gas extraction, production and transport." We therefore ask FERC to deny a certificate of convenience, eminent domain, to Williams and Cabot for the CONSTITUTION PIPELINE. As the Constitution Pipeline Project would absolutely induce development in our county and absolutely worsen our air quality, we ask FERC to deny the project outright.
- CO57-2 We want FERC to acknowledge Williams' use of segmentation, showing a lack of transparency and honesty about concern for our community. Williams continues to state the Williams Central Station is not part of this FERC project thereby evading any required Environmental impact statement for our county. We further ask FERC to require Williams and Cabot to do
- CO57-3 a comprehensive air study from upstream to midstream to characterize the air pollution during drilling, fracking, flaring/green completions, pipeline fugitive emissions, and dehydrators and compressors. We ask that fugitive emissions be part of this study and that the PICARRO SURVEYOR be employed.
- CO57-4 We ask for an independent team of researchers representing all stakeholders conduct this comprehensive air study to also evaluate cumulative public health impacts. We ask for Continuous Emissions Monitoring Systems be employed in this study at all natural gas sites and for the data to be totally transparent for public review. We recommend Dr Michael McCawley, Dept Chair, West Virginia School of Public Health, Dr Robert Jackson, Duke University, Dr Theo Colbourne, Endocrinologist, Dr Marilyn Howarth, University of Pennsylvania Center for Excellence in Environmental Toxicology, and Dr David Brown of the Southwest Environmental Health Project be consulted on and participate in designing and implementing this comprehensive air and public health study. Thank You.

Barbara Clifford  
214 Prospect St.  
Montrose Pa. 18801  
(610) 278-1812  
bclifford49@gmail.com

- CO57-1 The commentor's statements requesting denial of the proposed projects is noted. Potential impacts and mitigation from the proposed projects on air quality are discussed in section 4.11.1 of the EIS. See the response to comment CO26-11 regarding induced development.
- CO57-2 See the response to comment CO41-29 regarding Williams' Central Compressor Station.
- CO57-3 Section 4.11.1 of the EIS has been revised to include an expanded discussion of fugitive emissions. The commentor's request for the Picarro surveyor is noted. A comprehensive air study from upstream source to midstream transportation (from drilling to interstate transport) is beyond the scope of this EIS.
- CO57-4 As discussed in section 4.9.8 of the EIS, the primary health issue related to the proposed projects would be the risk associated with an unanticipated pipeline failure. As discussed in section 4.11.1 of the EIS, the proposed projects would not be expected to have a significant impact on local or regional air quality.

# COMPANIES AND ORGANIZATIONS

CO58 – Joint Landowners Coalition of New York Inc.

20140415-0051 FERC PDF (Unofficial) 04/15/2014



## Joint Landowners Coalition of New York, Inc.

To foster, promote, advance and protect the common interest of the people as it pertains to natural gas development through education and best environmental practices.

PO Box 2839  
Binghamton, NY 13902

Testimony of Dan Fitzsimmons

To: The Federal Energy Regulatory Commission

Re: Proposed Constitution Pipeline

CO58-1

The Constitution Pipeline will benefit the people of Upstate New York in many ways. Of course we all know that it will provide jobs during the construction and restoration period. It will also help to maintain jobs as in the case of Amphenol in Sidney where it will provide cheaper and cleaner energy to an already major employer.

The Constitution Pipeline will, once completed, provide additional revenue in the form of school and property taxes to the school districts and municipalities along the route of approximately \$13 million dollars each and every year. We are all aware of the financial crisis facing all of our schools and municipalities.

The planned taps along the pipeline route designed to allow gas to be distributed to municipalities along the route that presently do not have natural gas will make it possible for lower energy cost and reduced carbon footprints for upstate NY residents, school districts, and businesses. Also, these taps will help the Public Service Commission fulfill their plans to make natural gas more available to NY State residents.

Daniel Fitzsimmons  
President  
Joint Landowners Coalition of New York

CO58-1

The commentator's statements in support of the projects are noted.

S-854

COMPANIES AND ORGANIZATIONS

CO59 – Flying Changes B&B LLC.

20140415-0065 FERC PDF (Unofficial) 04/01/2014	
Flying Changes B&B, LLC.	
Glenwood Farm, Inc.	
357 County Highway 9	
Oneonta NY 13820	April 1, 2014
Kimberly Bose, Sect.	
FERC	
888 1 <sup>st</sup> . Street, NE, Room 1A	
Washington, D.C. 20426	
CO59-1	<p>We need the constitution pipeline for our local needs. The constitution pipeline will not only serve NYC Boston and New England, it also will provide cheap energy for our local towns and villages. The four taps from the pipeline will give our area an economic shot in the arm. Consider Sidney, N.Y. Have you been to Sidney lately? The majority of store front businesses once thriving now have “for rent” signs on their windows. The build out of a distribution pipeline will not only serve the largest employers in Sidney and our region but will also bring heating costs down for the residents and small businesses along Main Street. As it stabilizes costs with the larger employers it will and as a result also provide disposable cash to be spent locally. That tap will also serve Unadilla and its struggling small businesses and light industry. Unadilla Elementary will save close to about \$20,000 by switching from Propane to Natural gas. If the pipeline continues up state rt. 7 to Otego, N.Y., an additional \$60,00-\$70,000 will be saved in heating costs for the schools in the district. The addition is simple. We have an economic lifeline which may not solve all our problems but will help to alienate some of the pain our local schools are experiencing.</p> <p>Many of our towns and villages are revamping the comprehensive plans. All of them are foreseeing light industry. One of the first requirements for light industry is cheap affordable, reliable energy. The build outs from the taps will make this possible.</p>

CO59-1      The commentor’s statements in support of the projects are noted.

# COMPANIES AND ORGANIZATIONS

CO59 – Flying Changes B&B LLC. (cont'd)

20140415-0065 FERC PDF (Unofficial) 04/01/2014

CO59-1  
cont'd

As a business owner with a manufacturing project in the planning stage, I will look for a town to build which has pipeline potential. As a homeowner and farmer I fully realize the cost savings of Natural Gas.

I have included two pages of graph and data to support my statements above.

Natural Gas will lower heating bills in our schools , homes factories and public institutions. Natural gas will be an economic boost while providing additional employment and a stimulus to our economy.

Sincerely

Anna Marie Lusins

S-856

# COMPANIES AND ORGANIZATIONS

CO60 – Laborers International Union of North America  
(Local 785)

20140415-0066 FERC PDF (Unofficial) 04/02/2014

## LABORERS INTERNATIONAL UNION OF NORTH AMERICA

### LOCAL 785

622 W. State Street  
Ithaca, NY 14850

David P. Marsh  
Business Manager

April 2, 2014

Kimberly Bose  
Federal Energy Regulatory Commission  
888 First Street, NE Room 1A  
Washington, DC 20426

Constitution Pipeline-docket # CP13-499

Dear Director Bose:



Phone: (607) 272-3122  
Fax: (607) 277-6883

Steve Payne, Field Representative  
Chris Bushnell, Field Representative

CO60-1

I want to express my support of the draft environmental impact statement, (DEIS), I believe it adequately addresses all the issues presented by the 124 mile long Constitution Pipeline Project. As Business Manager of Laborers Local 785, I represent the 829 hard working men and women of Local 785. The majority of our members live and work right here in the Southern Tier and Central New York Regions. Due to the aging pipeline infrastructure installed 40 or more years ago, and the increased demand for natural gas in New York and New England, pipeline construction has become a significant portion of the work our local union laborers perform. In fact, over the last three years 30% of our work hours reported have been the direct result of pipeline construction or maintenance. The Constitution Pipeline will be built by Union labor and our National Pipeline Agreement requires minimum of 50% of the labor force to be local union labor. What this means is this pipeline will be built by your neighbors, and members of your local communities with the experience and knowledge to construction this pipeline safely and with as little impact as possible to the surrounding environment.

As are many of our laborers, I am not just a Laborer, I am also a father and a landowner. In fact, I am a landowner with an active pipeline running through my property. This 8" propane line was installed in the 1960's. The owner's of this line have safely operated it for over 50 years. This safe operation is due to the regular maintenance and inspection that happens on this line. Stretching across our entire rural neighborhood, this pipeline runs under my neighbors agricultural fields. For many years, I have seen him work this land with large farm equipment without incident or concern.

New York's pipeline infrastructure is aging. New lines need to be put in place to handle the demand. New lines, such as the Constitution, incorporate the latest in state of the art technology to ensure safe, reliable energy transportation. With the advances in coating systems and cathodic protection, the Constitution Pipeline has

# LIUNA!

3-10-14 11:11 AM

CO60-1

The commentor's statements in support of the projects are noted.

S-857



# COMPANIES AND ORGANIZATIONS

CO60 – Laborers International Union of North America

(Local 785) (cont'd)

20140415-0066 FERC PDF (Unofficial) 04/02/2014

CO60-1  
cont'd

a 100+ year lifespan. Today's monitoring systems can detect the most minute imperfection in a weld, or in the pipe. The Constitution Pipeline and aboveground facilities are designed, constructed, operated and maintained to meet the DOT Minimum Federal Safety Standards in 49 CFR 192 and other applicable federal and state regulations. In the Conclusions & Recommendations of the EIS, section 5.1.12 Reliability and Safety, the report notes that "although regulations requiring remote control shut-off valves have not yet gone into effect and would apply to pipelines built in the future, Constitution committed to the use of remote control shut-off valves for the proposed pipeline." It is estimated that 20% of the total construction budget will be spent to ensure environmental compliance.

Williams estimates the value of the Constitution Pipeline is approximately \$700 million. Maintaining this line and ensuring the continuous, safe operation of the line is not only mandated by NY DOT, and the right thing to do for the local community, it is also paramount to the protection of this massive investment. It is my belief and my personal experience that energy pipelines can be constructed and maintained safely with little or no impact on the local communities and property owners.

The Constitution pipeline will have both short term and long-term positive impacts from an increase in annual property taxes paid by the pipeline. Table 4.9.7-1, page 4-114 summarizes three of the major positive economic impacts for this pipeline and its construction. In New York State, construction payroll is estimated to be \$103.1 million dollars; annual property taxes are estimated to be \$12.7 million per year; and the cost of purchasing local materials is estimated to be \$20.3 million.

The Constitution pipeline will bring an estimated 1,300 much needed construction jobs to this area as well as an increase in jobs related to providing and transporting construction materials and supplies. Construction of this pipeline will be performed by Union construction workers. Our National Pipeline agreement requires that a minimum of 50% of the labor force be local, union labor ensuring that the a substantial portion of the personal income generated stays in the local communities. Section 4.9.1, page 4-136, "the economic benefits of its proposed project, ...would generate more than 224 indirect jobs in New York, five of which would be more long-term....jobs associated with construction and operation would generate approximately \$113 million in personal income for those individuals directly and indirectly employed".

America is an energy hungry nation. This energy must come from somewhere. This report acknowledges our need for energy and makes the following comments in the Executive summary, Alternatives Considered, ES-10 & ES-11, "The no-action alternative was considered for the projects. While the no-action alternative would eliminate the environmental impacts identified in the draft EIS, the user markets would be denied the projects' objective of delivering 65,000 Dth/d of natural gas from existing supplies in Susquehanna County, Pennsylvania to markets in New York and New England. This might result in greater reliance on alternative fossil fuels, such as coal or fuel oil or both. We also considered energy conservation and efficiency, and other energy source alternative (including renewable energy sources). Other fossil fuels are not as clean as natural gas, and renewable sources such as solar and wind power are not always reliable or available in sufficient quantities to support market requirements. We concluded that the no action

**LIUNA!**

*LIUNA!*

S-858

COMPANIES AND ORGANIZATIONS

CO60 – Laborers International Union of North America  
(Local 785) (cont’d)

20140415-0066 FERC PDF (Unofficial) 04/02/2014

CO60-1  
cont'd

alternative energy efficiency, and other sources of energy were not viable alternatives to the proposed projects in the required timeframe."

This environmental impact statement was compiled with input from the U. S. Environmental Protection Agency, the U.S. Army Corps of Engineers, The Federal Highway Administration, and the New York State Department of Agriculture and Markets and I feel adequately represents the impacts related to the construction and operation of the proposed Constitution Pipeline. Therefore, on behalf of the membership of Laborers Local 785 please accept the Constitution Pipeline EIS as written and issue a Notice To Proceed with Construction.

Respectfully Submitted,



David P. Marsh  
Business Manager

**LiUNA!**

Local 785

S-859

COMPANIES AND ORGANIZATIONS

CO61 – Upstate Landowners Group LLC

20140415-0087 FERC PDF (Unofficial) 04/02/2014

UPSTATE LANDOWNERS GROUP, LLC

James Worden  
1529 State Route 79  
Windsor, NY 13865  
Telephone: (607) 760-9459  
E-mail: [jworden@tjs.net](mailto:jworden@tjs.net)

April 2, 2014

Kimberly D. Bose, Secretary  
  
Federal Energy Regulatory Commission  
  
888 First Street, NE  
  
Washington, D.C. 20426

Re: Constitution Pipeline Project  
Docket No: CP13-499

CO61-1 Hello my name is James Worden. I am an intervener in this project as the manager of the Upstate Landowners Group LLC (ULG). I represent over 100 landowners and 30 miles of pipeline.

I would first like to say we are not interested in stopping the pipeline. We fully support the development of natural gas in the Northeast, and we know pipelines are needed for transport of the gas. The purpose of the ULG is to educate and negotiate a fair price for landowners who have the proposed pipeline going across their property. We have been involved in this process since the beginning. We have been in contact with Kevin Bowman, who has been excellent, and we would also like to thank FERC. Since FERC has been very receptive to our group, we are sharing some thoughts. We have demonstrated a commitment to cooperate in working out issues to get this project done.

CO61-2 We have been working with the Constitution Pipeline Co. on many issues including: a right to survey agreement and the Pipeline easement. While nothing with Constitution has been easy, we have been able to work out most of the issues needed to get the necessary paper for the project completed. Now, we are only looking for fair compensation.

CO61-1 The commentor’s statements in support of the projects are noted.

CO61-2 The commentor’s request to deny approval of the projects until easement agreements between Constitution and the Upstate Landowners Group have been reached is noted. See the response to comment FA8-3.

# COMPANIES AND ORGANIZATIONS

## CO61 – Upstate Landowners Group LLC (cont'd)

20140415-0087 FERC PDF (Unofficial) 04/02/2014

CO61-2  
cont'd

There is a standard set for pipeline easement value and that is far off from the Constitution's current offers. It is interesting to note that a Company that did set a local price standard, sold the pipeline to the parent company of the Constitution (Williams LLC) for many times the cost of installation. The easement percentage cost of this line dropped by the same multiple, and in essence the landowners received a far lower payment as a percentage of development cost.

In a way, Williams has already accepted that standard and is currently obligated to the landowners involved with that line. The difference is that development pipeline Company did not have the option of Eminent Domain, which William's has with the Constitution line. Also the capacity of the Constitution Pipeline is significantly larger, meaning the profit potential for William's is greater, while the current land easement cost offer appears to be far less. Eminent domain does not consider the overall value impact to a landowners remaining property. Constitution is also pushing for a permanent easement, and not limited number of years as in the previous pipeline's agreement.

I know that the purpose of FERC is to mostly protect the environment and to approve financially plausible infrastructure projects. We believe FERC is less concerned about compensation. When FERC issues the certificate to Constitution you are giving them the right to take landowner's property by the right of Eminent Domain, and that is taking away our ability to negotiate a fair price. Constitution has not yet responded to a reasonable offer from the ULG, which was sent per their request.

Again I would like to state that we are not interested in stopping the pipeline, but instead I would formally like to ask FERC and the Commissioner to not issue the certificate to The Constitution pipeline until they reach an agreement with the ULG.

Thank You

James Worden

Manager

Upper Landowners Group, LLC

# COMPANIES AND ORGANIZATIONS

CO62 – Laborers International Union of North America  
(Local 785)


20140415-0072 FERC PDF (Unofficial) 04/02/2014

**LABORERS INTERNATIONAL UNION OF NORTH AMERICA**

**LOCAL 785**

622 W. State Street  
Ithaca, NY 14850

David P. Marsh  
Business Manager



Phone: (607) 272-3122  
Fax: (607) 277-6883

Steve Payne, Field Representative  
Chris Bushnell, Field Representative

April 2, 2014

Kimberly Bose  
Federal Energy Regulatory Commission  
888 First Street, NE Room 1A  
Washington, DC 20426


Constitution Pipeline-docket # CP13-499

Dear Director Bose:

CO62-1 My name is Steve Payne. I am a Federal OSHA safety instructor, a pipeline safety instructor and a proud member of Laborers Local 785. Our jurisdiction is 9 counties of South Central New York. This pipeline goes through our side yard, and our back yard. This is where we raise our families, and where our children play.

We have a core of highly trained, experienced pipeline workers. We will ensure this pipeline is built to last, and built safely. I'll leave you with this parting thought, if someone in this room had a 60 or 70 year old artery going to their heart, old, corroded, deteriorated, they would get it fixed. Let's put some new pipelines in and take some of the pressure off the old ones.

I thank you,



Steve Payne  
Training Instructor  
Laborers Local 785 Training & Apprenticeship Fund

**LiUNA!**

CO62-1

The commentor's statements in support of the projects are noted.

S-862

Individual Comments

# COMPANIES AND ORGANIZATIONS

## CO63 – Unatego Are Landowners Association

20140425-0011 FERC PDF (Unofficial) 04/05/2014

627 Flax Island Rd.  
Otego, NY 13825  
April 5, 2014

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street NE, Rm. 1A  
Washington, DC 20426

RE: CP13-499-000  
cp13-502-000

Dear Ms. Bose:

- CO63-1 The Unatego Area Landowners Association (UALA), a three hundred family association of landowners in central New York, is in favor of gas development in New York. We also are in favor of the Constitution Pipeline that will service New York City and the Northeast.
- The UALA is principally situated in Otsego County. Only one of our members is along the Constitution Pipeline's right-of-way. He has asked us to present this brief in his behalf.
- CO63-2 Anyone who has ever dealt with real estate knows that there is no easy way to determine the "fair value" of a property. By its nature, "fair" is subjective. Usually its parameters are in the minds of the principals involved in the negotiation. In the end, the "fair price" is the price agreed upon by the buyer and seller.
- To its credit in the DEIS, Cabot Williams strives to arrive at a fair compensation with landowners along the right-of-way, using criteria enumerated on page 4.141 of the document. The size of the tract, current value of the land, utilities and services available and accessible, current land use, and the values of adjacent properties are factors cited. We understand from our contacts with landowners affected that, in the main, Cabot Williams has considered these factors and adjusted some offers accordingly. However, Cabot Williams enters the negotiating relationship with a powerful advantage -- the power of eminent domain.
- We recognize the necessity of the power of eminent domain -- that a

- CO63-1 The commentor's statements in support of the projects are noted.
- CO63-2 The draft EIS was prepared by the FERC rather than Cabot and Williams as stated by the commentor. Section 4.9.5 has been updated with new information concerning property values. See the response to comment FA8-3.

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# COMPANIES AND ORGANIZATIONS

## CO63 – Unatego Are Landowners Association (cont’d)

20140425-0011 FERC PDF (Unofficial) 04/05/2014 .

CO63-2  
cont'd

government can appropriate private property, with just compensation, in order to achieve a greater common good. We know that Kelo v. New London extends that right to private entities. However, there is another principle that should apply -- with great power comes great responsibility. It is under this principle that we make our argument.

In the DEIS Cabot Williams acknowledges that the presence of a pipeline can affect value. On pages 4.141 and 4.142 of the document, it states, “This is not to say that the presence of a pipeline, and the restrictions associated with a pipeline easement, could not influence a potential buyer’s decision to purchase property. If a buyer is seeking a property for a specific use which the presence of a pipeline renders infeasible, then the buyer may decide to purchase another property more suitable for their objectives.” However, the document then cites studies that show the effects of pipeline easements on sales and property values have little, if any impact. The studies cited are small, as is the entire literature in this area. For the most part, studies in this area have been sponsored by pipeline companies rather than independent entities. However, this is not the problem in these citations.

The problem is that research never accounts for the potential buyers who look at a property with a pipeline easement and just walks away. These potential buyers don’t mention their motive to the seller. They don’t mention it to the real estate agent. This segment of the population hasn’t been identified and factored into the studies. Its’ disengagement is a market force affecting the price and duration of sale. Until studies account for this segment of the buying population (not easy, but it can be done,) studies using current methodology contain a basic sample bias error that invalidate the findings.

Use common sense. Encumbrance. Disamenity. Impediment. All these terms are used in association with the word “easement.” None of them are positive.

CO63-3

In summary, we understand that subjectivity is suspect and acknowledge Cabot Williams’ attempt to use tract-specific variables in arriving at their version of a fair price. We applaud Cabot Williams’ concession that a pipeline encumbrance could influence a potential buyer’s decision to purchase a property. We ask the Federal Energy Regulatory Commission to encourage Cabot Williams to deal with this admission and turn the liability

CO63-3

See the response to comment FA8-3.

S-864

# COMPANIES AND ORGANIZATIONS

## CO63 – Unatego Are Landowners Association (cont'd)

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CO63-3  
cont'd

of an easement obtained under the power of law into an asset for the landowner. This could be done in the form of a rental agreement for the duration of the pipeline. This rental can then be passed from the current owner to a future buyer, thus providing the future buyer with an incentive rather than a disincentive.

It is not the purpose of this comment to speculate on the terms of such an agreement. My purpose is to advise FERC that landowners should not be considered an inconsequential means to what appears to be a very profitable enterprise. Cabot Williams has the responsibility to fully examine the rental option which mitigates the threat of seizure. They have the actuaries and the lawyers who can make sure that they are adequately protected both financially and legally.

Bryant La Tourette presented an outline in this regard at the Afton DEIS Hearing. Jim Worden, who represents about a hundred landowners along the right-of-way, including the member of the UALA for whom I am writing, also spoke at Afton. They have the particulars. Please accord them the courtesy of your full attention.

Thank you for your consideration of this matter.

Yours truly,

Richard Downey

cc: Senators Charles Schumer, Kirsten Gillibrand, Congressmen Chris Gibson, Richard Hanna, NYS Senator James Seward, NYS Assemblymen Clifford Crouch, Peter Lopez. Pennsylvania legislators to follow.

S-865



COMPANIES AND ORGANIZATIONS

CO64 – Leatherstocking Gas Company LLC

UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION

Constitution Pipeline Company LLC ) FERC Docket No. CP13-499-000 *et al.*

CO64-1 ANSWER OF LEATHERSTOCKING GAS COMPANY LLC IN OPPOSITION TO  
COMMENTS OF UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Pursuant to Rule 213 of the Federal Energy Regulatory Commission’s (“Commission’s”) Rules of Practice and Procedure,<sup>1</sup> Leatherstocking Gas Company LLC (“Leatherstocking”) hereby files this Answer in Opposition to the Comments filed with the Commission on April 14, 2014, by the United States Environmental Protection Agency (“EPA”) in which EPA states that it has rated the Draft Environmental Impact Statement (“DEIS”) submitted in the above-referenced proceeding on behalf of Constitution Pipeline Company, LLC (“Constitution”) and Iroquois Gas Transmission System, LP (collectively, the “Applicants”) as “Insufficient Information . . . primarily due to the incomplete discussion of a collocated alternative on Route I-88, and lack of an upland forest plan, direct impacts from access roads to wetlands, slope stability analysis, indirect impacts from local sales of natural gas, and an incomplete general conformity applicability analysis.”<sup>2</sup> To the extent that EPA claims that the DEIS is deficient as it pertains to “indirect impacts from local sales of natural gas,” and therefore requires supplementation, EPA’s criticism is unwarranted and requires no modification to the DEIS. In support of this Answer, Leatherstocking asserts as follows:

I.  
BACKGROUND

Leatherstocking is an intervenor and supporter of the proposed Constitution Pipeline. On February 12, 2014, the Commission issued the DEIS. The Commission established April 7, 2014

<sup>1</sup> 18 C.F.R. § 385.213.  
<sup>2</sup> EPA Letter dated April 9, 2014 at 1.

CO64-1 We have updated sections 1.1 and 4.13 with the provided information as applicable. It is not possible to perform a detailed cumulative impacts analysis of any natural gas distribution systems considered by Leatherstocking without specific information about the systems. Therefore, we made general assumptions to update the cumulative impacts section accordingly.

# COMPANIES AND ORGANIZATIONS

## CO64 – Leatherstocking Gas Company LLC (cont'd)

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CO64-1  
cont'd

as the comment date for those interested in commenting on the DEIS. The Commission also established procedures and meeting dates so that the public could provide comments in oral form.

On April 14, 2014, one week after the Commission-established comment deadline, EPA filed its “Technical Comments on the FERC’s Draft Environmental Impact Statement ‘Constitution Pipeline and Wright Interconnect Projects, February 2013’” dated April 7, 2014 (“EPA Comments”). The EPA Comments rate the DEIS as EC-2, referring to asserted “Environmental Concerns” and “Insufficient Information” in accordance with the Summary of Rating Definitions and Follow-Up Action attached to the EPA Comments. The EPA Comments refer to criticisms under several different categories. Leatherstocking Gas believes that the Applicants are in the best position to address most of these criticisms. Accordingly, in this response, the Company will focus on EPA’s assertion that the DEIS is inadequate in that it purportedly fails to address the “Cumulative Impacts” of the proposed pipeline and, more specifically, the potential impact of Leatherstocking Gas’s potential interconnecting facilities.<sup>3</sup>

### II. ARGUMENT

As indicated above, EPA asserts that the DEIS contains “insufficient information” in several areas, including “incomplete discussion of . . . indirect impacts from local sales of natural gas.” Under “Cumulative Impacts” EPA refers to the Memorandum of Understanding executed between Constitution and Leatherstocking Gas to allow interconnection and delivery of gas to homes and businesses in Pennsylvania and New York. EPA asserts that “[a]ny construction or distribution of natural gas by Leatherstocking Gas is an indirect effect of the Constitution

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<sup>3</sup> EPA Comments at 4.

COMPANIES AND ORGANIZATIONS

CO64 – Leatherstocking Gas Company LLC (cont’d)

898-S

	<p>3</p>
CO64-1 cont'd	<p>pipeline, and any reasonably foreseeable [sic] impacts should be analyzed. This should include, but not be limited to, impacts to waterbodies, wetlands, land use, and housing growth.”</p> <p>Considering that no routes have been selected, no detailed engineering and design work has been done, no final decision on franchise expansion has been made, and no filings have been made with the New York Public Service Commission (“NYSPSC”) for approval of franchises in New York, it is difficult to understand how EPA can assert that there is a reasonably foreseeable impact, much less one that can be analyzed. Leatherstocking Gas currently holds ten franchises from towns and villages in New York State<sup>4</sup> that would, if approved by the NYSPSC under Section 68 of the Public Service Law, allow the construction and operation of a distribution system to serve each of these communities. In Pennsylvania, while Leatherstocking Gas has 15 gas franchises, it currently intends to serve those franchises from mid-stream (<i>i.e.</i> gathering) systems, not from Constitution. In response to an earlier, similar set of comments by the New York Department of Environmental Conservation, we addressed a similar assertion that the proposed development of distribution facilities requires environmental review in the instant proceeding.<sup>5</sup></p>
CO64-2	<p>As a threshold matter, the local distribution facilities with which EPA purports to be concerned are not within the Commission’s jurisdiction. The Natural Gas Act (“NGA”) expressly excludes such facilities: “The provisions of this chapter . . . shall not apply to . . . the local distribution of natural gas or to the facilities used for such distribution . . . .”<sup>6</sup> Moreover, the applicants in this proceeding are not proposing to construct local distribution;</p> <p><sup>4</sup> Six of which are in close proximity to Constitution. <sup>5</sup> <i>Constitution Pipeline Company LLC</i>, Docket No. CP13-499 <i>et al.</i>, Answer of Leatherstocking Gas Company LLC in Opposition to Motion for Extension of Time (March 31, 2014). Based on the description in EPA’s Technical Comments, it is not entirely clear what level of review EPA is recommending. For the reasons stated below, however, there is no need for <i>any</i> review of distribution system-related potential impacts. <sup>6</sup> NGA §1(b) (15 U.S.C. §717(b)).</p> <p>14954428.3</p>

CO64-2 Even though Leatherstocking’s proposal is not jurisdictional to the FERC, we have made reasonable assumptions to include it in our cumulative impacts analysis (section 4.13 of the EIS).

# COMPANIES AND ORGANIZATIONS

## CO64 – Leatherstocking Gas Company LLC (cont'd)

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CO64-2  
cont'd

Leatherstocking Gas, an unaffiliated prospective customer, is the entity proposing to develop a distribution system. Any local distribution facilities and operations ultimately proposed by Leatherstocking Gas will be subject to full regulation by the NYSPSC – including environmental review of construction plans – not by this Commission. Any concerns EPA may have about the distribution system can be fully explored in proceedings before the NYSPSC. Such review is dictated by New York law; any franchise granted by a municipality requires the additional review and approval by the NYSPSC before it can be exercised. Furthermore, given the enthusiastic opposition to any project involving natural gas in New York State, there can be no doubt that every effort will be made to examine the minute details of any potential impact of any distribution facilities Leatherstocking Gas may propose.

NYSPSC review of proposed service area expansions has been and will be detailed and thorough. A useful example of the scope and depth of the NYSPSC's review is found in the relatively recent application to the NYSPSC by Corning Natural Gas Corporation ("CNGC"), a distribution affiliate of Leatherstocking Gas, to serve portions of the Town of Virgil, Cortland County, New York. The NYSPSC Order Granting a Certificate of Public Convenience and Necessity, issued June 19, 2009 in Case 09-G-0252, illustrates the detailed environmental review the NYSPSC undertakes pursuant to the State Environmental Quality Review Act in the course of determining whether to authorize the exercise of a gas distribution franchise pursuant to Section 68 of the New York Public Service Law. As evidenced by the aforementioned Order,<sup>7</sup> the applicant must file detailed information on the potential environmental impact of the installation of the distribution system and the NYSPSC performs a detailed review of the

<sup>7</sup> The Order can be viewed on the NYSPSC website:  
<http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={CF4DF4ED-B25B-41EA-AC71-AF8125DD7C69}>

# COMPANIES AND ORGANIZATIONS

## CO64 – Leatherstocking Gas Company LLC (cont’d)

CO64-2  
cont'd

proposed project, including discovery and field investigation.<sup>8</sup> In addition, as illustrated by the Order, the review and permitting process is one in which all parties have an opportunity to participate actively.<sup>9</sup> The process is thorough and represents a rigorous exercise of state jurisdiction that does not require duplication at the federal level.<sup>10</sup> While EPA’s possibly inadvertent suggestion to “federalize” the planning and construction of local distribution facilities and force the Commission to devote its resources to such matters is indeed creative, it has no relationship to the reality of what is permitted, much less required, to be considered in this case.

Although the siting and construction of interconnection facilities, once identified specifically, along the proposed pipeline may be appropriate objects of review by the Commission, that does not mean that review of whatever may eventually be connected to them downstream of the pipeline<sup>11</sup> is either within the jurisdiction of the Commission or necessary to the exercise of the Commission’s responsibilities in this proceeding. Leatherstocking Gas hopes to serve the Village and Town of Sidney at some point in the future and is considering expansion to other potential service areas. It has not yet performed the engineering, specific routing analyses or identification of optimal interconnection points necessary for such development. If Leatherstocking Gas decides to proceed with the proposed gas distribution system, it will perform all the necessary work and make all the necessary filings to enable the NYSPSC to carry

<sup>8</sup> In the present context, it is particularly noteworthy that, historically, where Leatherstocking Gas’s affiliate, CNGC, has conducted franchise expansions (as in the Town of Virgil), it has located its facilities primarily in public rights-of-way. Leatherstocking Gas intends to follow the same practice.

<sup>9</sup> See, e.g., Order at 6-9.

<sup>10</sup> The Town of Virgil case is also instructive in that the new local distribution system in that instance was also being constructed directly off the DTI pipeline; yet the Commission was neither required, nor apparently found it necessary, to engage in review of the impact of the new distribution system on the entities and facilities under its jurisdiction.

<sup>11</sup> Leatherstocking Gas intends to construct and own everything downstream of the interconnection point; that is, the gate station, metering equipment and all distribution pipe. Leatherstocking Gas has no plans to add compression. The pipe itself will be plastic and Leatherstocking Gas has no plans to use it for transmission or gathering from local wells.

# COMPANIES AND ORGANIZATIONS

## CO64 – Leatherstocking Gas Company LLC (cont’d)

CO64-2  
cont'd

out its review function – a process in which EPA would be free to participate as to any subjects within its subject matter responsibilities.

It is difficult to imagine how the Commission could ever complete its review or, for that matter, how any pipeline project could be certificated if, any time a project is proposed, the applicant and the Commission had to examine, the environmental and other attributes of any distribution system or distribution customer that could conceivably interconnect with the proposed facility. Such speculative and redundant review would seriously undermine the economic development efforts of the State of New York and, in particular, the State's efforts to revitalize the region to be served by an expanded distribution system, supported by the proposed pipeline.

As an example of the importance placed on gas expansion by economic development authorities in New York State, Leatherstocking Gas has received an Industrial Development Agency grant for \$750,000 for construction of gas distribution facilities to serve the Amphenol Aerospace manufacturing facilities located in Sidney, New York. Amphenol employs over 1,000 individuals in those facilities and is a major contributor to the local economy in an otherwise recession-weakened region (the Southern Tier of New York). Before the distribution facilities to serve Amphenol and other areas in Sidney are constructed,<sup>12</sup> they will be subjected to the rigorous review of Public Service Law Section 68. Aside from being beyond the Commission's jurisdiction, EPA's suggested review would unnecessarily duplicate regulatory review and run a very real risk of threatening high-value economic development in this depressed region.

<sup>12</sup> In Sidney, as in other potential distribution areas, Leatherstocking Gas has not fully designed the distribution system; but a major emphasis of that design will be on constructing the necessary facilities within existing highway rights-of-way, thereby minimizing any potential environmental disturbance.

COMPANIES AND ORGANIZATIONS

CO64 – Leatherstocking Gas Company LLC (cont’d)

CO64-2  
cont'd

WHEREFORE, Leatherstocking Gas respectfully submits that EPA’s argument that the potential construction of distribution facilities by the Company is an indirect effect of the proposed pipeline, requiring further submission of information and further analysis, is not sustainable and should be rejected.

Respectfully submitted,  
  
*Stanley W. Widger, Jr.*  
  
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Dated: April 25, 2014

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document on each party listed on the Official Service List compiled by the Secretary in this proceeding.

Dated in Washington, DC this 25th day of April, 2014.

Elizabeth W. Whittle  
Elizabeth W. Whittle

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